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Dr J. Kneip

Vol. XI., No. 6.

JUNE, 1860.

New Series, Vol. 2., No. 6.

THE FARMER AND PLANTER



PRICE, \$1 A YEAR, ALWAYS IN ADVANCE.

THE \$50 PREMIUM SECURED IN MARLBORO'.

Our friend, Mr. J. B. WILLIS, of Clio, is, so far, entitled to the \$50 pitcher, having sent us one hundred and two subscribers. In his letter containing the last list, he says:

"I wonder what the editor of the *Tribune* would think, if he knew that one man in South Carolina had obtained over one hundred subscribers to the *Farmer and Planter* from the middle of March to the 20th of May, and that without losing more than one day from his business."

We don't know what the editor of the *Tribune* may think, but we know it was good work, and only regret that our friend WILLIS was the only man in the State who felt sufficient interest in the journal to make the attempt. No other man competed for our first prize. To show what could be done, with a little effort, we insert the following extracts from letters:

A gentleman in Florida, writes, "I picked up the enclosed list (13) of subscribers, at a friend's house, yesterday. It is an evidence of what can be done, by asking planters to patronize an agricultural journal. We all think some one else will attend to the collecting of subscribers, and the thing is never done."

Another gentleman in one of the lower Districts of this State, writes,

"There are but about 40 persons who take papers of any kind at this Post Office, and I could only induce twenty-two to take the *Farmer and Planter*." (If every Post Master in the State would do as well for us, in proportion—we would feel like a half starved cow in a clover patch, and a grumble would never be seen in our journal.)

If we could only adopt some plan of humbugging the planters, we have no doubt our journal would be prosperous; but so long as we stick to plain straight-forward truths, we can meet with but little encouragement.

OUR JOB PRINTING OFFICE.

It is well known that but few papers can exist without a good advertising patronage, and as the *Farmer and Planter* is not favored with such a resource, or a decent number of subscribers to sustain it, we must look to other means to enable us to make up the deficiency. We have, therefore, fitted up a complete printing office, and respectfully ask the friends of the journal in the country to use their influence to procure us work. We have many subscribers who are anxious to keep the journal up, but have not the tact or inclination to canvass for subscribers, yet could often do much for it, by recommending our office for printing. We have every facility for doing all kinds of printing, while our type is all new. We are not ashamed to work, nor do we think it beneath our dignity to ask for work. Think of us friends, whenever you can throw a dollar towards us.

OUR MARCH NUMBER.

From some unaccountable cause, we are almost daily receiving notices that subscribers have not received the March number. We printed and mailed as many of that number as of any other, and it does appear strange that it alone should be mislaid or lost. We, however, have again run out of that issue, and if any of our friends have spare copies, they will much oblige us by sending them to us. If they wish to keep the *map* they can do so, as we can replace it.

AUCTION SALE OF FINE CATTLE.

We refer our readers to the advertisement of the Auction sale of Ayrshire, Devon and Short Horn Cattle, to come off at Haverstraw, New York, on the 27th of this month. Col. JOHNSON and L. G. MORRIS, gentlemen well known by all stock-raisers, as reliable and experienced men, will attend to any orders for purchases from those not able, personally to attend.

YORKVILLE MILITARY SCHOOL.

This institution is now one of the best in the South, and we are truly pleased to hear that its enterprising young founders are receiving that success which they so richly deserve. Our space forbids us saying more at present, but we shall refer to it again. In the meantime, we ask our readers to examine the advertisement in this issue.

PREMIUMS OF CHOICE TURNIP SEED.

We will forward, for every new subscriber sent us during the months of June and July, a package containing 2 ounces of either of the following choice Turnip Seed: Fine White French Turnip, (this was fully tested in this State, last year, and found to be a very superior Turnip,) Ruta-baga, Red Top Strap Leaf, White Strap Leaf, White Norfolk, or White English.

FOR A CLUB OF TEN,

We will send the getter up of the Club one copy extra, and a copy of either of the following valuable books: Richardson on the Horse; do. on the Hive and Honey Bee; do. on the Hog; Dana on Manures; The Cow, by Milburn; Cole's Veterinarian; Every Lady her own Flower Gardener.

PREMIUMS OF SEWING MACHINES.

To any one procuring 100 or over, new names this year, we will award one of Singer's Sewing Machines, worth \$53.

To any one sending us two hundred subscribers we will send a Sewing Machine, worth \$97.



VOL. XI.

JUNE, 1860.

NO. 6

R. M. STOKES, }
PROPRIETOR. }

COLUMBIA, S. C.

{ NEW SERIES
{ VOL. 2, No. 6

For the Farmer and Planter.

ESSAY ON REFORESTING THE COUNTRY,

To which was awarded the Prize by the South Carolina State Agricultural Society.

BY WM. SUMMER, POMARIA, S. C.

The importance of wood, in its various uses for fuel and the mechanic arts, attracts the attention of all observers, and the preservation and improvement of the forests in their greatest degree, has been a subject which, at an early period, has received the countenance of some of the wisest governments of Europe. As early as three centuries since Germany wisely set a good example, in the preservation of her forests, and established forest academies, in which all the branches of knowledge relating to them is taught. The principal branches in which instruction is given is forest botany, mineralogy, geology and chemistry, by which the learner receives a correct knowledge of the natural history of forests, so as to understand the raising of all kinds of wood, and the supplying a new growth as fast as the old is taken away; and so admirably has this system worked, that her immense forests have been preserved for hundreds of years in a thrifty condition, and are now sources of revenue to the government. France has followed, and enacted a *code forestier*. The English forest laws have only reference to the preservation of game, and do not impart such general good to the community. In our own country we see this important subject attracting the attention of DeWitt Clinton, who looked to the future wants of his country, and in one of his messages to the New York Legislature, he advised a premium and exemption from taxation, to be given

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en to all who should re-forest a certain number of acres. His State, like many others, has not heeded his wise suggestions; but his views have not been lost sight of, and some of the State Agricultural Societies now offer liberal premiums for this object, requiring to a certain space so many trees to be set, which are particularly valuable in constructing implements of husbandry and the mechanic arts.—We have little hope of legislative encouragement, which, if wisely directed, would do much for the preservation and improvement of our forests, in their highest degree; but this is above private effort, and would require joint action, on a system which, when once wisely begun, and long continued by the men of one generation for those of the next. It would be wise to order a survey of our forest, among its other domains, that our people might know the sources of their wealth and its extent, and learn how to value, enlarge and enjoy it.

We have little hope of legislative aid and encouragement in our day, even if the subject was presented by a chief magistrate, devoted to her welfare; or, a memorial which might be prepared by the ablest committee which might be selected from our State Agricultural Society, that it would even receive a passing notice.

The evil is before us and stares us in the face, when we reflect that a little more than a hundred years has passed by, and South Carolina's glorious forest, which sheltered our forefathers in the hour of battle, have all disappeared before our ruthless and destructive system, which has required fresh lands for the production of our great staple; and only patches of forest left to show the rising generation what it was.

Not only the timber so useful and necessary in

the mechanic arts has thus been destroyed, but even the wood for fuel which would have afforded ample supplies for future generations, in preparing these fresh cleared fields, has been wasted, and the present generation is now beginning to feel sensibly this improvidence in our ancestors. These fields are exhausted, and require large drafts from the remaining forests to render them productive. What then is to be done? One of two alternatives is left. We must either abandon our lands and seek a new home where the ruthless axe can find the new forest and subjugate it; or improve a sufficient portion of the cleared lands, and renovate the rest, by permitting it to grow up, or by planting it in forest. We think the last is to be preferred, and we hope to be able to show that this can be effected by private effort. The level lands should be improved by deep plowing, and a regular system of manuring with green crops, and leaves from the forests, so as to be of more value, and as productive as when first cleared. The broken and hilly lands, so injudiciously cleared up in the early settlement of the country, should again be set in forest growth. Here at the commencement we have striking examples of what nature has done for us in the growth of the pine, which so readily springs up and renovates our worn-out fields, particularly if the lands which are to be turned out are sown down with early fall grain.—This furnishes a bed for the reception of the fallen seed which ripen and drop out in September and October, and the winds will carry them and scatter over a large extent. The western winds prevail briskly at this season, and aid much in disseminating the seeds over a large space. The young grain protects the tender plants which vegetate in November, and in early Spring. If a few pines have been permitted to stand in clearing up the lands, they will seed a large extent, and we have frequently seen instances of this kind, where the young pines have sprung up thickly in the neighborhood of trees thus situated. The pine, by its long tap-root, penetrates deeply into the subsoil, and thus deriving support from the potash, which for ages has been washed down into the subsoil: and this again is deposited in the surface soil to restore and assist in the formation of fresh mould. We have here some lands which have grown up along side of the original forests, which have been thoroughly renovated by this course; and now, in addition to the growth of pines, the oaks, hickories, dogwoods, elms, hollies and the red cedar, are being generally distributed, thus forming a valuable forest growth, rendering the land truly valuable.

But we must not leave nature to do what is our

duty to do for ourselves. We should gather the seeds, the acorns, and prepare the soil for their reception—and here we have a most encouraging example, which we are able to refer to—one which should stimulate and encourage all who have the improvement of their dear old native State at heart. We allude to the experiment of sowing acorns, made by Micajah Buchanan, forty-four years ago. His tract of land was a long parallelogram. He commenced clearing it at one end, but after some years he found that one side of his cleared lands washed away, and was soon bare and unproductive. He resolved to renovate it by sowing it down with acorns. This he did, continuing the cultivation of the level land, from all of which he excluded his stock. We visited this tract, now owned by a worthy and respectable citizen, Wm. R. Hentz, and found about six acres of this new forest still remaining, upon which are growing oaks, pines, hickories and dogwoods. The pines measure two feet in diameter, and are fine specimens of this tree, being free from limbs, and of beautiful and thrifty appearance. We measured several of the oaks and found many of them 22 and 23 inches in diameter, and from 60 to 70 feet in height, smooth and thrifty in growth, without any evidence of decay in the branches.—The piece consists of a sloping hill-side, running parallel with the low lands on the river, and is lying in Newberry District, immediately above Henry's Shoals, on Broad River. Mr. Buchanan only sowed acorns. The hickory, dogwoods, elms and pines, were seeded from the adjoining forest. The old washes which occurred in cultivation are still to be seen in many places. This is equal in value to any of the original forests, and we were pleased to learn from Mr. Hentz, that he intended to preserve this, and not permit it to be cleared during his time, and we trust it may long be preserved as a monument of Micajah Buchanan's perseverance and industry.

The Oak is one of the most valuable trees for fuel, and valuable for its toughness and strength.—In our climate, the acorns should be gathered as soon as they fall from the trees, and preserved in a shady location until they are to be sown. We would advise the land to be sown in small grain, and after the grain is plowed in, then to sow the acorns and harrow them in, or cover them with a brush harrow. This will cover them about one inch deep, which will be sufficient to preserve a degree of moisture to make them vegetate freely. The young grain will protect them until Summer, when they will withstand the drought and flourish. Care must be observed to exclude all kinds of stock, until they

have advanced to sufficient height to admit the range of swine—the only stock that it would be prudent to permit to run upon the land.

The pines, elms, and the ash, if there are any trees bearing seed in the neighborhood of the new forest, will spring up.

The Elm is one of the most hardy and beautiful trees, and from the vigor and number of its roots is more frequently and successfully planted than any other tree. It is oftener spared in pastures as shade for cattle, and left to give shade and comfort to the farm dwellings. The flowers are in numerous clusters, from eight to twenty in a cluster, on the side of the terminal branches. The seed ripen in a thin flattened seed-vessel, called a samara, which is winged on every side, with a thin fringed border.—The flowers appear early in March, and the samara are mature before the full expansion of the leaves. The seed should then be gathered and sown on freshly plowed soil, or carefully preserved until Autumn. Besides its use as a shade and ornamental tree, its timber is preferred for the hubs of wagons and earriages.

The European Elm, *Ulmus Campestris*, is the finest and most ornamental of the species, and most of the beautiful elms of Boston and the neighboring towns, are of this species; and it is superior for hubs, even to our own much prized American elm. It is a rapid grower—is a noble tree. It has perhaps less grace than the American, but more grandeur. The branches are more compact, and the leaves darker in color, and it has, moreover, the advantage of the leaves appearing early in Spring, and being clothed in an unchanged foliage several weeks longer than our native tree. Twelve years ago we budded a tree of this variety, which is now ten inches in diameter and forty feet high. It matured a quantity of seed for two seasons past, which readily vegetated and grew off rapidly. The wood of this variety has great lateral adhesion, and is less liable to crack or split when exposed to sun or weather, and is, therefore, even more valuable than our own species. It is also remarkable for its durability in water, which makes it valuable for gearing exposed to water.

The Ash.—The ash yields alone to the oak in the number and importance of its use. The timber of no other tree in Europe, or the United States, equals it in elasticity, and its hardness and strength, and other valuable properties. On that of our species, as of that of England, might be pronounced the elogium of Spencer:

“The ash for nothing ill.”

A page might be devoted in naming alone the

uses to which this timber may be applied, and for which it is particularly applicable.

The flowers appear in April, before the opening of the leaves, and the keys or samara are mature in July and August, about which time the leaves begin change to an olive hue. These seeds often remain nearly the whole winter upon the trees, and are distributed to a considerable distance by the winds.—We observe along a spring branch, where some trees have been left, that the seeds were distributed for a half mile, and young plants have sprung up and are growing rapidly, producing a fine effect among the pines, cedars and hollies. Within sight of the Pomaria Station, on the Greenville Railroad, may be seen a clump of an acre or more, upon which they have sprung up thickly within a few years, producing a large supply of fuel, and are valuable for many useful purposes. There are many other instances of a like character that we could refer to if it were necessary. On light sandy soils no tree would yield so quick a return for fuel, and we hope to see some effort made to encourage its growth and extend its usefulness.

The Pride of India.—China tree.—As a tree for fuel alone, we think no variety would yield so quick a return; the wood is excellent for burning, and when consuming makes a brisk lively coal, resembling ash or hickory. It sprouts readily when cut down, and would give an immense quantity of wood to the acre. The only objection would be the great difficulty of subduing the roots, when it would be necessary to bring the land in cultivation. The berries should be soaked and rolled in ashes, when sown in Spring, or they may be planted without this preparation. They will not vegetate until warm weather. Sheep and goats and cattle will destroy the young plants, but it is to be supposed that no person who would sow seeds of any kind would expose them to destruction. It is one of the best and most ornamental woods for cabinet-work, and would be valuable if grown for this purpose.

The *Catalpa* is also a valuable tree, and from its rapid growth and easy culture, should be extensively grown. It furnishes wood which is durable and valuable for posts, which will be in demand for the construction of straight and improved fences, which must, with the scarcity of wood and our improved husbandry, take the place of the unsightly worm fence.

The bean-like capsules or seed vessels, contain a number of seed, when broken, and readily vegetate when sown in early spring.

We could mention other varieties which would serve to fill up and give easily to a new forest, but those enumerated are most useful.

Hedges should be planted generally, as a substitute for fencing, to protect and preserve the remains of our original forests, as the timber now required for fencing is a continual drain upon our wood-land. We are persuaded that a few experiments with the Macartney Rose and Osage Orange, would soon convince any one that they would prove both convenient and economical in the end.

The decay of vegetable matter, from the annual fall of the leaves, gradually improves, enriches and forms a soil, and the barren and waste lands are made productive and valuable, and the sheltering shrubs, which have found root and grown up, preserve even the hill-sides from washing rains.

Another use of forests is to serve as conductors of electricity between the clouds and its great reservoir, the earth, thus giving activity to the vital powers of plants, and leading the clouds to discharge their contents upon the earth. A few tall trees on the summit of a hill are sufficient to produce this effect. A charged thunder cloud, which passes unbroken over a bare hill, will pour down its moisture if its electricity is drawn off by these natural conductors. The dry sterility of some parts of our country is probably owing, in a great degree, to the improvident destruction of the forests, and the careless system which discourages their renewal. The forests also coat the earth and keep it warm in winter, closing in the central heat, which otherwise would radiate into space and be lost. Forests act not less favorably as a protection against the excessive heat of the summer's sun, which rapidly evaporates the moisture and parches up the surface.

The rains falling on the woods of a hill-side is retained by the deep and spongy mass, formed by the roots, and the accumulated deposit of leaves, instead of rushing down, as it otherwise would, in torrents, carrying with it great quantities of loose soil. Protected also from rapid evaporation, it remains laid up as in a reservoir, trickling gradually out and forming perennial streams, watering and fertilizing the low-country through the longest summers, and moderating the violence of droughts by mists and dews. All over the country numerous little streams which were formerly fed by the forests are now dried up at that season, or have disappeared altogether, and only furnish drains for the falling rains. Forests thus equalize the temperature and soften the climate, protecting from the extremes of heat, dryness and humidity. There is little doubt if our forests could be, in a great degree, restored to our hills, the fertility of our soils would return, and our streams protected by the sheltering trees,

along their banks, would do much to renew regular and refreshing seasons. - Now there is nothing on our bare hills to conduct electricity, nothing to arrest the clouds and make them pour their treasures upon the earth, no reservoirs to lay up the winter's rain in store, against the drought of summer. For all these purposes the forests are of vast immediate and prospective importance. The most barren sands along the coasts of France and in Flanders have been successfully sown with pines. We have among our native trees a much greater variety of evergreens.

Many acres now under cultivation, and poorly repaying the labor spent on them, might be advantageously grown up with pines, or sown with acorns, to mingle with the pines which would spring up.—The rocky hills and hilly lands were originally covered with trees. Sufficient portions of them remain to show that all might, with a little pains, be redeemed to a productive use. We know that there are many who will not heed these admonitions, and who are ready to tear up all associations of soil and kindred, and seek fresh lands to devastate with the ruthless axe; but are there no ties which bind us to our native soil? nothing to tempt us to remain and lay our bones beside our ancestors? nothing to attach us to a State made dear by the life-blood of our forefathers? a State which gave us a Marion, a Sumter, and, in later and darker hours, a Calhoun? Yes, we should wish that those who are to follow us should grow up under the influence of our institutions, which our forefathers formed for us, and which we are endeavoring to improve.

For the Farmer and Planter.

EXPERIMENTS ON CORN,

Made at St. Julien's plantation, in 1859, to test the relative value of *Cotton seed*, *Gas Lime*, *Kettlewell's Guano*, and *Rhodes' Super-phosphate of Lime*.

Land selected for the purpose had been long cleared. The soil sandy, clay 1 to 2 feet from surface. It had been marled in 1843, and for many years planted in nothing but cotton, generally manured with rotted pine leaves, sometimes rested; for 8 years previous to 1859, had cotton without intermission.

A plat 4 tasks (600 feet) long, and 80 rows (320 feet) wide, was selected in as level a spot as could be found; in February it was broken up with a two horse turning plow, to an average depth of about 8 inches; laid off in rows 4 feet apart, and crossed at 2 feet 9 inches, and the corn planted in the check

on the 24th of March. It was then divided into 20 parts (each 4 rows wide and 4 tasks long), and these were numbered from 1 to 5, so that each number was repeated 4 times, and equally distributed over the whole: thus avoiding, as much as possible, any differences arising from inequality of the soil.

On the 11th of May, cracked cotton seed, at the rate of 26 bushels per acre, was put at the foot of the corn in all the plots except those marked 5, and covered with the plow, the number 5 receiving the same plowing as the others. On the 23d of May, the fertilizers were sown on each side of the row, in the last furrows, and at the following rates per acre: In the plots No. 1, 220lbs Rhodes', No. 2, 254lbs Kettlewell's, and No. 3, 224lbs Gas Lime.—These were at once covered by the plowing which came at that time.

The first work done was on the 23d of April, when two bull-tongue furrows, one on each side, were run across the rows, and quite near the corn. From that time to the 29th of June, which was the last, there were four more workings, at nearly regular intervals, each consisting of one furrow, with cash plow on each side, throwing up a bed, except the last, which was divided so that the alternate mid-rows were broken out with a sweep, and the dirt drawn up with hoe, and the same repeated in a few days in the other mid-rows.

The seasons were sufficiently favorable to require no particular remarks. In about two weeks after the seed was applied, all except No. 5 began to grow rapidly, and assumed a rich color, which continued through the season, so that there was to the eye *very* little, I may say no difference, between the first 4 numbers.

On the 14th of October, the corn was broken in and measured, under the supervision of three of my neighbors. The results are given in the following table, calculated per acre:

	Total Product.			Product over nothing.			Product over or under Seed.			Cost of Fertilizers exclusive of seed.		Cost of seed at 20 cents.		Cost of Extra productions per bush.	
	B.	P.	Q.	B.	P.	Q.	B.	P.	Q.	\$	c.	\$	c.	\$	c.
No. 1, Seed and Rhodes'.	32	0	3	10	0	4	5	2	4	5	0			1	05
No. 2, Seed and Kettlewell's,	8	2	6	6	2	7	2	0	7	7	0			3	15
No. 3, Seed and Gas Lime,	6	0	6	4	0	1	1	7		1	3				
No. 4, Seed,	6	1	7	4	2	1						5	20	1	15
No. 5, Nothing,	1	3	7												

It will also be observed that gas lime and seed did not make by 15 quarts as much as the seed alone. I would not, from so small a difference, attribute any *injurious* effects to the lime, but simply look upon it as useless when applied as above. I

think, too, it is highly probable that the results in the other cases would have been more favorable had the seed been put out earlier, or had smaller quantities of the fertilizers been used.

EXPERIMENTS ON LONG COTTON,

Made at St. Julien's plantation, in 1858 and 1859, to test the relative value of *Cotton Seed, Gas Lime, Rhodes' Super-phosphate, Common Salt, and Columbia Guano*—this latter from L. M. Hatch, of Charleston. I state this as it is a manipulated stuff, and may not all be the same, except in name.

Land selected: light sandy clay, from 1 to 2 feet below, cleared in 1843, and planted nearly every year since in cotton—always manured with rotted trash—had been marled soon after clearing.

In 1858, 72 rows, 4 feet apart and 150 long, were selected in as uniform a part of the field as could be found; these were divided into six equal parts, planted and worked with the rest of the crop, but in the fall the product of each, picked and weighed separately, the result is given per acre in the first line of table.

In 1859, the six plats were all manured with compost, as they had been the year before, and listed with the hoe. On the 14th of April, the list was opened with a plow, and the fertilizers, accurately weighed or measured, sown in the furrow at the following rates per acre: In No. 1 nothing, No. 2 18½ bushels cracked cotton seed, No. 3, 225lbs Columbian guano, No. 4, 225lbs Rhodes', No. 5, 225lbs salt, and No. 6, 225lbs gas lime. The beds were drawn up immediately with the hoe, and the cotton planted two feet apart on the bed on the 16th. All came up well, needed no replanting, and was worked with the hoe five times during the summer. During the growth there was nothing worthy of note, except that some of the stocks in No. 2 either died or were cut by worms, and that Nos. 3 and 4 were apparently equally superior to the others, Nos. 3, 5 and 6 next, and No. 1 last. The product of each lot was again picked in every respect, as it had been in 1858, and the results given in fourth line of the table. Finding that the product of No. 1, which was treated alike each year, was 15 per cent less in '59 than '58, I presumed that the seasons would have made the same difference in all the others, and accordingly reduced them in the same manner (disregarding fractions), and got in the 3d line the *probable* crop of '59, had there been no fertilisers used.

The calculations in the table are in seed cotton per acre.

	1	2	3	4	5	6
	Nothing.	18 1/2 bushels Cotton seed.	225lbs Cof'a guano.	225lbs Rbodes.	225lbs Salt.	225lbs Gas Lime.
Crop of 1858.....	575	581	600	6.6	600	562
15 per cent. (deducted to give).....	85	87	90	91	90	84
Probable crop of '59.....	490	494	510	515	510	478
Actual Crop of '59, without Fertilizer	490	640	685	771	640	512
Difference in favor of '59.....		146	175	256	130	34
Clean cotton (1lb for 5 of seed).....		29	35	51	26	7
Value at 35 cents per pound.....		\$10.15	\$12.25	\$17.85	\$9.10	\$2.45
Cost of Fertilizers (entire).....		3.75	4.50	6.18	1.50	1.31
Net profit per acre.....		6.40	7.75	11.67	7.60	1.14

I have taken 35 cents as the value per pound. I got for that same cotton this year 38 cents, and 38 is the average at which the five previous crops were sold. Five pounds of seed cotton were allowed for one of clean, to be within bounds; generally about 4 are required.

GENERAL REMARKS.

If the above experiments be taken as tests, it will be seen that the bought fertilizers are much more profitable when applied to cotton than to corn.— Here the gas lime was almost useless, but one of my neighbors informs me that he estimates the increase, by its use on his plantation, to be 28lbs of clean cotton. Cotton seed, when applied to corn,

is worth only 18 cents per bushel, but for cotton it it may pay a cost of 50 cents.

As to the two modes of trying the experiments I would say that, as far as I can judge, they are both equally accurate; the only disadvantage connected with that adopted for cotton is, that it extends through two years. Most of the experiments we see recorded are generally tried by taking contiguous acres or half acres without repeating. This I think quite objectionable, since, as is shown by the cotton experiment, though I took the most uniform spot I could find, and restricted it within narrow limits, the difference in the production of the lots, even when treated alike, is quite marked. I do not think I could find, on my plantation, two adjoining half acres so equal as to make them fit for experiments, and therefore I adopted the two methods above described; by the first the land is as it were mixed up and averaged; by the second its actual productiveness is ascertained before it commences the experiment, and one part is left for the purpose of estimating the effects of seasons. I would espccially call attention to these facts by our up-country experimentalists, whose lands are much more rolling, and probably more unequal than mine, which are comparatively level.

It may seem strange to some that in none of my experiments have I used Peruvian Guano; the reason for this is that I did try it several years back, in two different parts of the plantation, and found that where the soil was thin and the growth small it produced a profitable increase; but where the cotton or corn grew to a sufficient height with the ordinary compost, the guano made the plant grow inordinately without any increase of production, and in one instance even with a decrease; I accordingly never used it again, and prefer the phosphatic manures; Kettlewell's Guano, which was a mixture of Peruvian and something else, sustains in a measure the opinion I had already formed.

BAREFOOTED NOTES ON SOUTHERN AGRICULTURE.

BY AN OLD GRUMBLER.

NO IX.

The true Grasses—Their Characteristics—Value—Varieties, &c.

True grasses, with hollow stems, which are cylindrical and jointed, and closed at the joints, are characterized by alternate leaves surrounding the culm, and split open on the side opposite to the blade, and furnished, at the junction of the blade, with a manifest scarious appendage, furnish the principal food

of the human race, and of the more domestic animals. This vast order, *Gramineæ*, comprising about 230 genera, and not less than 3,000 species, is most generally diffused, and the most important to man of all the families of plants. We shall now take up the

POA SUB FAMILY,

Which contains the most valuable species, embracing most of the useful cereals and forage plants.

1. *Leersia Oryzoides*.—Wild Rice—Cat Grass.—A perennial grass, common to both hemispheres, abundant in swampy meadows and along the margins of muddy streams. Its rough character renders it an objectionable species, where finer grasses can be cultivated, but, if cut at the proper stage, it furnishes an abundant crop of nutritious and palatable hay. It will not flourish on soils dry enough to be grazed. Easily distinguished by its rough bulrush-like feel.

2. *Oryza Sativa*.—Common Rice—Native of Asia, but profitably naturalized in the Southern States. The importance of the rice plant, to tropical regions, can scarcely be estimated. It enters more largely into the nourishment of the human family than any other cereal, not excepting wheat. Its growth, and the inexhaustible fertility of lands devoted to its culture, are incident to the tropical and semi-tropical regions in which it flourishes.—In Central America, Africa, East Indies and China, it is the standard cereal; and, strange to say, when left in the husk, it is free, in a great measure, from the attacks of insects. Water culture being used also secures an exemption from their depredations whilst the plant is growing. This is really a happy exemption. The failure of the rice crop of the world would consign millions of human beings to the grave, victims of famine.

3. *Zizania Aquatica*.—Water Oats—Indian Rice—*Meinfaruous* Minnesota Rice, once disseminated by the Patent Office, which is as common in our salt-marshes as it is on the inundated flats of the northern streams and lakes. It is much relished by domestic animals, but from the nature of its growth, on lands partially inundated, it will never be an acquisition to the agriculturist.

4. *Alopecurus Pratensis*.—Meadow Foxtail—A perennial grass, considered of great value in England, both for grazing and mowing. It delights in rich moist loam, and is sometimes mistaken for Timothy. It would flourish well in our up-country meadows, if they were made sufficiently rich, and stagnant water not allowed to stand on their surfaces. Its hay is, however, light, when compared to its green bulk.

5. *Phleum Pratense*.—Meadow Phleum—Cats-tail grass—Timothy of Pennsylvania—A perennial grass of great value and of foreign origin, but naturalized successfully in the United States. It is well suited to the dry low grounds of Upper Carolina, Georgia, Alabama and Mississippi, and, mixed with red clover, makes the best of hay. It should never be sown on any but rich lands. A few acres of low land, if devoted to these grasses, would render every planter independent in forage, and would soon drive abolition hay from the mangers of City horses in the South.

6. *Agrostis Vulgaris*.—Bent-grass—Common Agrostis—Herd-grass—Red Top—A perennial creeping rooted grass, native of Europe, but naturalized everywhere in the United States. Its botanical character is various, and it was once styled *A. polymorpha*. The whole genus of Agrostis is known in England as "Bent-grass," and one species, *A. Alba var. Stotonifera*, was the once celebrated "Florin Grass," which, on suitable soils, yields great crops of hay. Red top is easily distinguished when in seed, by its slender erect culms, leaves lanceolate, panicle loose, ovoid, oblong, usually purple. It is admirably adapted for seeding wet boggy pastures and meadows, and soon mats over the ground, rendering it compact and capable of bearing heavy animals. It is, for such purposes, the most valuable cultivated grass we know.

7. *Agrostis Indica*.—Black seeded Agrostis—Indian Agrostis—Smut Grass—A perennial native of India, now perfectly naturalized in America, grows in rich soils around old settlements, a good grass, but too slender for the scythe; evergreen in Florida, and furnishes fine grazing for sheep. The black smutty appearance of the seeds is caused by the perforation of insects, followed by a fungus.

8. *Muhlenbergia diffusa*.—Drop-seed Grass—Nimble Will—A slender delicate grass, clothing the ground, in old pastures and open woodlands, with a rich coat of verdure. It springs up rapidly, late in summer, and is a valuable native grass. It is one of the few native grasses which has any value at all as a grazing grass. The hay from this grass is superior, but the yield small.

9. *Muhlenbergia Mexicana*.—Mexican Muhlenbergia—Another variety, similar in habits and character to *M. diffusa*.

10. *Cynodon Dactylon*.—Bermuda Grass—Doab Grass—Everybody knows the "Bermuda Grass," as it is now called. It is perennial, and *never in our climate produces seed* which will vegetate. "Rip," in the *Farmer and Planter*, for October, 1859, says "this is a most serious mistake." If "Rip" will

gather us ten bushels of seed which will vegetate and stock a field, we will pay him \$10 for every bushel, or *one hundred dollars for ten bushels*.—The publisher of this paper is hereby authorized to let "Rip" know who makes the offer, and that we are responsible, and in earnest—the money to be paid as soon as the seeds vegetate. This grass was originally introduced from the East Indies into Bermuda—hence its present name. Mr. Ainsley Hall, one of the founders of Columbia, first introduced this grass into South Carolina, as a lawn grass. It is the best pasture grass for the South. Easily set from the roots, perennial, flourishing in hot weather, rich and nutritious, not particular as to soils, flourishing on clays and sands, on hill-sides and in valleys, from the sea-board to the mountains—it is *the great grass of the age*. On rich valley land it makes fine hay, and, though not well adapted to the scythe, it suits the mowing machine. It is a fine lawn grass, mixed with Kentucky Blue Grass (*Poa pratensis*), and White Dutch Clover (*Trifolium napeus*). If the arid sand-hills of South Carolina were planted in Bermuda grass, they would furnish the best sheep walks in the world. The hill-sides of the middle and upper country would be similarly valuable for the same purpose. Deep winter plowing, with thick seeding of Spring oats, followed by peas in two seasons, will eradicate this grass, so as not to be troublesome to the cotton planter. In 1859, we made 1,500lbs seed cotton to the acre, on land which two years previous was a mat of Bermuda grass. If "Rip" will follow our detailed directions for destroying nut-grass, (*vide* May number *Farmer and Planter*,) he may eradicate Bermuda grass with profit to himself. Let him first gather us ten bushels of seed which will vegetate. It is transmitted from pastures to cow-pens by cattle, in the clefts of their hoofs, and only spreads *e radice*.

11. *Digitaria Sanguinalis* (*Panicum Sanguinalis*).—Crab Grass—Crop Grass—An annual grass, a native of India, now the most extensively naturalized of all the foreign varieties. In all our cultivated fields it abounds, and although a great pest to tilled crops, its greater value for grazing in autumn should not be under-estimated. It also furnishes a large amount of the best hay, yielding a greater weight in proportion, when dried, to its bulk, than any other grass. Whenever the plow goes in the South, the crop grass follows. All kinds of stock are fond of it, and it rapidly fattens every animal that feeds upon it—proving conclusively that "all flesh is grass." It is at home in our stubble fields, and after the grain is harvested, furnishes fine grazing and good mowing. It, however, does

not retain its hold, but will not re-appear in quantity if the soil is not annually stirred.

12. *Eluesine Indica*.—Crow-foot—Another naturalized annual from the East Indies, which furnishes the best hay in the South. Its erect habit, rank verdure, and fine properties, render it well adapted to mowing, and it is not inferior to Crab grass for this purpose. It is later in coming to maturity. Suited to all parts of the South.

13. *Eluesine Coracana*.—A native of Coramandel, which is cultivated as corn. Its value is uncertain.

14. *Eluesine Crucata*.—Cross-spiked Eluesine—Annual—A native species of Crow-foot, but neither as tall or as valuable as *Eluesine Indica*.

From the Lancaster Ledger.

GUANO.

MR. EDITOR—Dear Sir:—Guano, as a fertilizer of land and a stimulant to crops, has given rise to a great deal of discussion, and that of a conflicting nature to the agricultural interests of our country. Therefore, when I venture to give my experiments, on the effects of Peruvian Guano, through the columns of a public journal, I do so with considerable diffidence; since I have had but one year's experience upon the subject, and more especially when I consider my pen very inadequate to the performance of such a duty. History has long since proven that these conflicting opinions do exist in the political and religious world as well as the agricultural.—Therefore, I hope you will pardon me for my seeming forwardness, in giving through your paper, to the people of this District, a data of my experiments on Guano. More particularly, since I have heretofore evinced a seeming disposition and anxiety to see the people of this District elevated in the scale of agricultural progression.

I have long been anxious to see a railroad in Lancaster District, and I think Guano will be a mighty lever in the accomplishment of such an enterprise—if it still continues to produce results similar to the experiments I made last year. I have often made enquiry of gentlemen who had made experiments on guano, but not one of them gave an answer satisfactory to me. They all told me that it would pay well, but when I invest money in any enterprise, I want to know, either directly or indirectly, to a mathematical demonstration, what I can realize upon the capital invested. In giving my experiments, I will give the nature of the soil, preparation of land, mode and time of application, and also cultivation of land.

It was late in the spring when I got my Guano up, consequently, I had my land prepared to plant. I opened the beds with a long straight shovel.—After having pulverized and sifted the Guano very fine, I made boxes out of white pine, very light, about 3 feet long, 9 or 7 inches wide at the top, 1½ or 2 inches at lower end. At the wide end I attached a string on each side to put around the servant's neck, with a sack to hold the Guano.—The servant would put his hand into the sack

and get it full of Guano, and then put the hand into the box and guide it, letting the Guano fall according to the thickness you wanted it. I put at the rate of one hundred pounds per acre. I forthwith throwed two furrows on the Guano, and then commenced planting. My object in using this box was to keep the wind from blowing the Guano away, and to get it down in the centre of the furrow. The land upon which this experiment was made has been cleared about one hundred years—soil is clay of a cold nature. The cotton was planted about the 25th of April, and from the extreme dry spring, it never came up until some time in May. The first time I hoed it without plowing; then in about ten days I plowed it with a sweep plow—two furrows in a row; then in about two weeks I plowed it with a forked plow, with two small grabs, the inside edges straight, that heaped some dirt up to the cotton, and then I put the hoes in, about a week behind the forked plow; thinned the cotton out where it was too thick, and I brushed a little dirt from each of the small ridges among the cotton; after that time I plowed it with a sweep, sometimes one furrow and sometimes two, and brushed it over with the hoe.—I then topped it from the 10th to the 15th of August.

I left one row in the field 70 yards long. I was particular enough to pick out a row in some place where it would be the same quality of land from one end to the other, and the same liability to the effects of dry weather. The two rows upon which the experiment was made were side by side. The summer was extremely dry until 3d of August, and no blossom was seen for a week or two after the 4th of July. The following data shows the result of the two rows:

WITH GUANO.		WITHOUT GUANO.	
<i>First Picking.</i>		<i>First Picking.</i>	
1st time	40 bolls.	1st time	3 bolls.
2d "	112 "	2d "	14 "
3d "	160 "	3d "	37 "
4th "	200 "	4th "	90 "
5th "	107 "	5th "	50 "
6th "	100 "	6th "	80 "
- 719 bolls.		- 274 bolls.	

The per cent. on the guano row exceeded the non-guano row at the different pickings, resulted as follows:

GUANO ROW.		NON-GUANO ROW.	
1st time	- - - - -	1233	per cent.
2d "	- - - - -	700	"
3d "	- - - - -	332	"
4th "	- - - - -	122	"
5th "	- - - - -	53	"
6th "	- - - - -	25	"

The total per cent. on the number of bolls of the guano cotton exceeded the non-guano cotton 162. According to this statement the non-guano cotton had the advantage over the guano cotton, from the fact that it would take about 3 bolls of the non-guano cotton to make 2 bolls of the guano cotton. I will now proceed to show the per cent. on the money invested, upon a supposition of the difference in the yield of eight acres, that I had manured with guano, and then supposing that it had had no guano. The

eight acres made 6400lbs with guano, and without guano it would not have exceeded 300lbs per acre. I put cotton in the seed to be worth $3\frac{1}{2}$ per hundred, and the seed 15 cents.

WITH GUANO.		WITHOUT GUANO.	
6400lbs at $3\frac{1}{2}$,	\$224.00.	2400lbs at $3\frac{1}{2}$,	\$84.00.
Cotton seed	19.20.	Cotton seed	7.20.
	243.20		91.20
Cost of guano,	26.00		
	217.20		

This is 484 per cent. on the money invested, according to this calculation. I have made the statement very plain, for the information of every man. The guano row made at the rate of 503 pounds to the acre, counting 100 bolls to the pound, and the non-guano row made at the rate of 191. These two rows were on about as thin land as was in the field. My experience proves that it pays better on pretty good land than poor land. Here is the reason from this fact: I picked 7 rows 70 yards long where the ground was damp; therefore it did not suffer from the effects of dry weather so much, and it made at the rate of 2080lbs per acre.

I also made an experiment on corn, but have come to the conclusion that it will not pay as well on corn as on cotton, one season with another, and here is my reason why: Corn may be in the act of shooting at the time of a severe drought, and the stalk of corn having but one ear generally, if it misses that it misses all. The cotton is a different kind of weed, from the fact that it has more fruit, and drought may effect a part and not the whole. Some stalks have from 3 bolls to three and four hundred, but very few stalks of corn have more than two ears. The experiment I made with corn, yielded 50 per cent., but it is precisely with the corn as with the cotton in one respect, which is this: it will yield more corn on damp and cold land. It will yield more from the cold land in dry weather than it will from warm. Here is my reason, and every man who has had any practical experience on a farm, will perceive, where he plants on a warm spot of land, say, for instance, an old homestead, that the corn or cotton will grow off early in the Spring, and, consequently, it will fire sooner from the effects of dry weather. It is upon this principle that I argue that guano will pay better upon cold land than warm. I was not so accurate in my experiment with corn as I was with cotton, notwithstanding I believe it will pay upon corn. In the very same field where I made fifty per cent. on guano, where the rows were counted, in the same field where the land was damper, the yield would have been 150 to 200 per cent. This difference may occur in this way, the corn on the warm and more thirsty land may shoot out earlier, because the cold land may hold back longer for rain.

I have heard it alleged against guano that it fired the plants, and that I believe, where unwise judgment is exercised in the application of it, and unskillful cultivation on the crop. I had heard time and again that guano would nearly burn up corn and cotton in dry weather, but to my astonishment my corn and cotton, under which guano had been

put, fired less than any other part of my plantation. I have heard that guano impoverished land where a succession of crops were continued. That is a subject upon which I have no experience. But then, I do believe if guano will even make one hundred per cent., I can use it and make it a matter of economy. This would be my *modus operandi*: I would put guano on a piece of cotton land one year and make 400 pounds more than I would have otherwise made without the guano, and 8 bushels of cotton seed. The next year I would plant it in wheat; the next I would let it grow up in weeds; the next plant it in cotton again, and I believe by that process I could get the same amount of money from my land in one year that I would otherwise in two years work. I would then get clear of one year's work and expenses.

Guano was made, and has been brought into use, by an all-seeing Providence, for a very wise purpose. That purpose, I think, is to equalize the advantages and disadvantages between exhausted and fresh countries. Had it not have been for the use of Guano, I have no doubt some parts of our State would have been nearly depopulated. Mr. Editor, one more remark I have to make about guano, then I have done.

I would not be responsible for guano benefiting every farmer or planter, for a great many will not take the pains with it that it should have. I do not think guano will pay either a farmer or planter, who suffers himself to get a good deal in the grass or pusley. From the fact, that the ammonia in the guano causes it to rise to the surface, consequently, if his cotton gets in the grass or pusley, he will chop the effects of the guano from the cotton, then I do not think it can do the same good. I have bought three tons of Peruvian Guano, and some of Kettlewell's manipulated guano.

After trying it another year I think I can then form some better idea what it will do. I believe Mr. Wm. J. Cureton is the first man that introduced guano into this District. He deserves great credit for such an enterprising disposition. I know he will be among the first men to build a railroad to Lancasterville.

J. A. C.

From the Rural Register.

MILK, AND DAIRY PRODUCE GENERALLY.

"THE COMPOSITION OF MILK."—The appearance and the usual qualities of milk, are too well known to require description here. It differs considerably in its composition as obtained from different animals, but its general nature is similar in all cases. From 80 to 90lbs, in every 100lbs of cow's milk, are water. This quantity may be increased by special feeding for this purpose. Some sellers of milk, in the neighborhood of large cities, who are too conscientious to add pump-water to their milk, but who still desire to dilute it, contrive to effect their purpose by feeding their cows on juicy succulent food, containing much water; such watered milk they are able to sell with a safe conscience, though it may be doubted if the true morality of the case is much better than if the pump had been called directly into action.

From 3 to 5lbs, in each 100lbs of milk, are curd

or casein; this is a nitrogenous body, like gluten, albumen, animal muscle, &c. Casein is a white, flaky substance, and can be separated from the milk in various ways. There are also in every 100lbs from 4 to 5lbs of a species of sugar, called *milk sugar*; this is not so sweet as the cane sugar, and does not dissolve so easily in water. It may be obtained by evaporating down the whey, after separation of the casein or curd. In Switzerland, it is made somewhat largely, and used for food.

The butter or oil amounts to from 3 to 5lbs in every 100 of milk. Lastly, the ash is from $\frac{1}{4}$ to $\frac{3}{4}$ lb in each 100. This ash is rich in phosphates, as shown by the following table; it represents the composition of two samples, each of the ash from 100lbs of milk:

	No. 1.	No. 2.
Phosphate of lime23	.34
Phosphate of magnesia05	.07
Chloride of potassium14	.18
Chloride sodium (common salt) .	.02	.02
Free soda04	.03
	0.50	0.67

The butter, as stated above, is from 3 to 5lbs in each 100 of milk. It exists in the form of minute globules, scattered through the liquid. The globules of butter or fat, are enveloped in casein or curd, and are a very little lighter than the milk; if it is left undisturbed, they therefore rise slowly to the surface and form cream. If the milk be much agitated and stirred about, the cream will be much longer in rising; so, also, if it is in a deep vessel, as a pail, in place of shallow pans. Warmth promotes its rising.

When milk is drawn in the usual way from the cow, the last of the milking is much the richest; this is because the cream has, in great part, risen to the surface inside of the cow's udder; the portion last drawn off then, of course, contains the most of it. Such a fact shows the importance of thorough and careful milking. In some large dairies, the last milkings from each cow are collected in a separate pail. More milk is said to be obtained from the same cow when she is milked three times a day, than when but once or twice; less when milked once than twice, but in this last case it is very rich.

Some large breeds of cows, are remarkable for giving very great quantities of poor watery milk; other small breeds give small quantities of a milk, that contains an uncommon proportion of cream.—These large breeds are kept in many parts of the country about London, for the purpose of supplying the city. By giving them succulent food, the milkmen contrive to increase still farther the watery nature of their milk, as before noticed.

The small breeds have one great advantage: it requires a much less quantity of food to supply the wants of their bodies, so that all over that quantity goes to the enriching of the milk. A weight of food therefore, with which they could give good milk, would only suffice to keep up the body of the larger animal, and the milk would consequently be poor and watery. This is, probably, one chief reason why the milk of the small breeds generally exceeds so decidedly in richness.

OF BUTTER.—We are now to consider the various methods of making butter, and some of the questions connected with its preservation. The object in churning is, to break up the coverings of the little globules of butter; this is done by continued dashing and agitation; when it has been continued for a certain time, the butter appears first in small grains, and finally works together into lumps.

Where cream is churned, the best practice seems to be, to allow of its becoming slightly sour; this sourness takes place in the cheesy matter or casein, that is mixed in the cream, and has no effect upon the butter beyond causing its more speedy and perfect separation.

In many dairies the practice is to churn the whole milk. This requires larger churns, and is best done by the aid of water or animal power; it is considered to produce more butter, and this is said by some to be finer and of better quality. I do not think that there have been any very decisive experiments upon this point.

The excellence of butter is greatly influenced by the temperature of the milk or cream, at the time of churning; if this be either too hot or too cold, it is difficult to get butter at all, and when got, it is usually of poor quality. A large number of experiments have been made with regard to this point, and the result arrived at is, that the cream should be churned at a temperature, when the churning commences, of from 50 to 55 degrees of Fahrenheit's thermometer. If whole milk is used, the temperature should be about 65 degrees F. at commencing. In summer, then, cream would need cooling, and sometimes in winter a little warmth. It is surprising how the quality of the butter is improved by attention to these points. I have seen churns made double, so that warm water, or some cooling mixture, according as the season was winter or summer, might be put into the outer part. It will be seen, that in whatever way the temperature is regulated, a thermometer is a most important accompaniment to the dairy.

The time occupied in churning, is also a matter of much consequence. Several churns have been exhibited lately, which will make butter in from 3 to 10 minutes, and these are spoken of as important improvements. The most carefully conducted trials on this point have shown, that as the time of churning was shortened, the butter grew poorer in quality; and this is consistent with reason. Such violent agitation, as is effected in these churns, separates the butter, it is true, but the globules are not thoroughly deprived of the casein which covers them in the milk; there is consequently much cheesy matter mingled with the butter, which is ordinarily soft and pale, and does not keep well. Until the advocates of very short time in churning can show that the butter made by their churns, is equal in quality to that produced in the ordinary time, farmers had better beware how they change their method, lest the quality of their butter, and consequently the reputation of their dairy, be injured.

Butter contains two kinds of fat. If melted in water at about 180 F., a nearly colorless oil is obtained, which becomes solid on cooling. If the solid mass be subjected to pressure in a strong press, at about 60 F., a pure liquid oil runs out, and

there remains a solid white fat. The liquid fat is called *elain*, and the solid fat *margarine*. These two bodies are present in many other animal and vegetable oils and fats. They are both nearly tasteless, and when quite pure, will keep without change for a long time. In presence of certain impurities, however, they do change.

If great care is not taken in washing and working, when making butter, some butter-milk is left enclosed in it; the butter-milk, of course, contains casein, the nitrogenous body which we have already described; there is also some of the milk sugar before mentioned. The casein, like all other bodies containing much nitrogen, is very liable to decomposition. This soon ensues therefore, whenever it is contained in butter; and certain chemical transformations are by this means soon commenced, whereby the *margarine* and *elain* are in part changed to other and very disagreeable substances; those which give the rancid taste and smell to bad butter. The milk sugar is instrumental in bringing about these changes. It is decomposed into an acid by the action of the casein, and has a decided effect upon the fatty substance of butter, causing them to become rancid. This action and consequent change comes on more or less rapidly, as the temperature is warmer or colder.

No matter how well the butter is made in other respects, if butter-milk be left in it, there is always, from the causes above mentioned, a liability to become rancid and offensive. When packed in firkins, it will be rancid next to their sides and tops; and will be injured to a greater or less depth, as the air may have obtained access. Salting will partially overcome the tendency to spoil, but not entirely unless the butter is made so salt as to be hardly eatable. Another reason for much of the poor butter, which is unfortunately too common, is to be found in the impure quality of the salt used. This should not contain any magnesia or lime, as both injure the butter; they give it a bitter taste, and prevent its keeping for any length of time. Prof. Johnson mentions a simple method of freeing common salt from those impurities. It is to add to 30 lbs of salt about 2 quarts of boiling water, stirring the whole thoroughly now and then, and allowing it to stand for two hours or more. It may be afterwards hung up in a bag, and allowed to drain. The liquid that runs off is a saturated solution of salt, with all the magnesia and lime which were present. These are much more soluble than the salt, and are consequently dissolved first.

Want of caution as to the quality of salt used, and of care in separating the butter-milk, cause the spoiling of very great stocks of butter every year; a large part of that sent to Europe is sold for soap grease, and for other common purposes, simply because these points have been neglected."

It is doing some service to humanity to amuse innocently; and they know very little of society who think we can bear to be always employed either in duties or meditations without any relaxation.

ALL who have meditated on the art of governing mankind, have been convinced that the fate of empires depends on the education of youth.

From the Southern Rural Gentleman.

COTTON SEED OIL.

I have no means to locate the following, but presume it was from Maryland or Virginia:

"I find, among my memorandums, that in the year 1806, I imported from Charleston, nine bushels of cotton seed, *weighing forty-four pounds per bushel*, (Italics my own) on which I caused an experiment to be made, to ascertain the quantity of oil it would yield by the process usually practiced in extracting oil from flax seed. The result was, that the nine bushels produced six and one-quarter gallons of clear oil, of a quality quite equal, if not superior, to flax seed oil, for painting. The seed was not of the best quality, nor was the experiment very perfectly made.

T. E."

We now see, in 1823, that a gentleman did produce oil in 1806. The nine bushels weighing 44 pounds, equal to 396 pounds, or equal to very near 12 bushels, as now generally rated, 25lbs to the bushel, and 6½ gallons, at 100 cents—say \$6.25, or equal to fifty cents per bushel. I have seen it stated, that the refuse would pay for pressing—thus our cotton seed would be worth fifty cents per bushel. Again, put the cake equal to corn meal, and charge five cents for pressing—the price some think it costs—we then have, say fifty cents for oil, and as it takes, under good management, three bushels to make one of hulled seed, and about half is oil cake, we have cake worth at least twenty-five cents, or cotton seed worth seventy-five cents, per bushel, and river planters selling at 12½! Sell yourself to the Yankee, at the present value of a dime, and let some more careful one manage!

I sent you an article, upon the above subject, by a former mail, and promised to send you some papers in proof. I remember distinctly of seeing the huller at work in South Carolina, before I saw Mississippi, and may have, in some former notice, placed the time too early. I have seen Southern journals tickling Northern aggrandizement, by giving them the credit of having invented cotton seed hullers, pressing cotton seed oil, and purifying it for use as a burning, painting and machine lubricating oil. Northern papers claimed, as their indefeasible right, to look to Southern welfare, and, like a good guardian, attend to our interests. Having a distinct remembrance of this oil matter, I stated to several editors what was my recollection. After writing the article, I concluded I would turn to mine "ancient archives," and bring to light the facts. I append hereto, sundry extracts from Southern papers, and request those now living, who remember those newspapers, or who may have any proof to the contrary of what I here state, to bring forth, or hereafter to let it be understood, that what I produce are facts. Gen. David R. Williams has relatives living who can, perhaps, produce all proof needed. He was, at one time, Lieut. Governor of South Carolina, I think, a member to Congress, and rather a prolific writer—his heart set on agriculture, and all the improvements of the day—and a man who deserves more a monument to his memory, by the tillers of Carolina soil, than all their battled host, not that they deserve not.

In June, 1820, a writer over the signature of

"Columbianus," in the *American Farmer*, says:—"The oil of the cotton seed, managed and expressed in the manner of flax seed oil, appears to be an object worthy of greater consideration than it has received." I know not the author, but the name Columbianus, indicates to my mind where the writer hails from. On the 1st of February, 1822, W. R. Bull, another of Carolina's sons, asks, through the *American Farmer*, for the process of extracting oil, &c., from cotton seed."

Early in 1822, an article in the *Pee Dee Gazette*, a South Carolina paper, and published not far from where Gen. Williams lived, calls public attention to cotton seed oil, and calculates that a clear income of \$6,600,000 could then be added to Southern resources by making oil, and then the "remainder of the seed is equal in value to corn meal for feeding cattle."

The *Alabama Journal* notices an accidental discovery of a "Mr. John Gray, of Georgia," who made whiskey by mixing corn with cotton seed, with "a large quantity of oil, bland, and of drying quality, well suited for painting." This I see noticed April, 1828.

In February, 1829, I find a notice from the *Political Arena*, a Virginia paper, (I think,) announcing that a cotton seed huller was invented by a gentleman of Petersburg, and the importance estimated by the inventor, putting up a gin to gin cotton for the seed, or, as in my younger days, a tenth was given for ginning, paying a tenth for seed—if cotton be worth ten cents, or forty dollars per bale, the owner received eleven cents, or forty-four dollars per bale. Then comes in the facts, letters from inventors, specimens of oils, a manufactory in Virginia, Machine in South Carolina, and at last one erected in Natchez, Mississippi, yet the North claim.

P.

The above is from the pen of the indefatigable Dr. PHILLIPS, who suffers few things connected with Southern agriculture to escape his eye. We have hastily taken a retrospect over some old records in our library, and find it stated, in 1818, that "Oil of cotton seed is selling at Providence, R. I., at 80 cents per gallon. The French Chemists say that two gallons and a half of oil can be made from 100lbs of seed. The cotton seed was hitherto thrown away as useless." In 1836, it is stated by a correspondent of the *Southern Agriculturist*, published in Charleston, (E. H. Bacon,) "that a machine for expressing oil from cotton seed has been established in Darien, and fifteen cents per bushel was offered for it for that purpose."

In 1837, we find in the *Farmer's Cabinet*, "among the many discoveries and improvements of the age is that of manufacturing oil from cotton seed, as a substitute for sperm oil. The seed is hulled, pressed, and then clarified. The oil bran is very valuable for food, and is thought to be equal to linseed bran or oil cake. A charter has been ob-

tained from the Legislature of New Jersey, and it is expected a manufactory will go into operation the ensuing summer, in Burlington or Gloucester county."

The very fact that this invention has been so long before the public, and produced so little fruit, is sufficient evidence of its little value, to our mind; and now that everybody has become willing to admit the value of cotton seed as a manure, it will hardly pay to convert it into oil and cake. Can we not make more and a better food by its application to the soil as manure? that is the question.

THE HORSE.

To improper treatment in the stable, respecting cleanliness and comfort, and also the manner of feeding, may be traced about half the diseases that the horse is heir to. It would seem that after becoming the faithful servant of man, that his condition should be bettered, and the number of his diseases lessened; but instead of this, we find his servitude entails upon him a long list of diseases, unknown to the wild races. Much has been said and written about regularity in feeding, but we would reiterate it, again giving "line upon line, and precept upon precept." Feed at stated hours. Let the work be so arranged as to accomplish this. In most cases it may be done as well as not. In feeding, do not give more than your horses will eat up clean, as it may cloy them, and cause loss of appetite; for if you are feeding mixed feed with chop, (in warm weather,) it will sour, and is generally wasted. Hay, however, should be kept in their racks at all times. There is no danger of eating too much of it. One main desideratum, towards keeping horses in good, thriving condition, is to keep up the appetite, so that they will eat plenty of roughness. The food given to horses in the countries of Europe, differs materially from the general course of treatment which they receive in our own country. In England and France, beans, peas and barley, as well as carrots, and other roots, constitute important articles of diet. In this country, and especially in the West, such feeding is scarcely known. In many large districts of the West, corn and fodder, either put up in shocks, or else the blades stripped and tied in bundles, constitute the whole course given throughout the winter.

This is essentially wrong, and as conclusive proof, I would say that, where such feeding is practiced, I have invariably remarked an unusually large number of diseased horses. An occasional *change* of food is just as beneficial to the horse as his master, promoting appetite and health. When horses are working they should have crop feed, consisting of sheaf oats, cut up and mixed with rye meal, wheat bran, shorts or corn meal. Wet the feed sufficiently to moisten the whole, and stir well together. If using rye meal or shorts, wet the oats, and stir before putting in the addition, then stir again. In this way the meal becomes thoroughly mixed where otherwise the water would cause it to stick in lumps, with perhaps dry meal in the centre. A few ears

of corn given after the chop, or some shelled oats mixed with it, will make a feed sufficiently nutritious for any occasion.

The cutting-box I use is Sanford's patent. I consider it the best and cheapest *good* straw-cutter in use. It is also an excellent article for cutting sausage meat, and consequently, during the hog killing season, it may be made to answer a double purpose. No one can be too particular in curing hay, oats, &c., for feed. Anything of the kind fed in a damaged condition is very injurious. *Smutty grain* will sometimes cause mares in foal to lose their colts. Clover hay, when properly cured, makes excellent feed for horses standing idle. Timothy is better and more strengthening for animals in constant service.

Horses are much benefited in health and condition by running to grass occasionally. Indeed, there is nothing much better for an animal that has been abused than rest and pasture. One reason perhaps why farm horses are less liable to disease than those kept about towns, is the fact that the former are generally allowed pasture a good portion of the year, whilst the others are kept almost exclusively upon dry feed. When preparing a horse for a hard day's work, a journey, or any other fatigue, it is well to give better feed (richer), and more of it, for a few days beforehand, than the ordinary course. Some persons foolishly give a heavy feed just before starting, which, instead of having the desired effect, produces just the opposite result.—Instead of strengthening, stimulating and nerving the animal for extra exertion, as a *few days* of extra attention will do, he becomes sluggish and feverish on account of his over-loaded stomach, and the effect is to destroy his spirit and vital energy.—*Southern Homestead.*

CHARCOAL AND PLASTER.—Charcoal dust is a powerful absorbent of atmospheric ammonia, and consequently a valuable fertilizer. Powdered charcoal is perhaps the best thing that can be used to absorb unpleasant odors, arising from decaying animal and vegetable matters. A handful of charcoal dust scattered over the vaults of privies, sink-spouts, &c., will immediately correct any unpleasant odors arising therefrom. Plaster of Paris is probably the next best thing for this purpose. It should be used freely in stables, &c., especially during the warm weather. The use of these absorbents not only promotes health, but effects an important saving of valuable fertilizing matters. Rose bushes and other choice shrubs and flowers, in the garden, or in pots, derive great advantages from the application of charcoal to the surface of the earth around them.

THE violet grows low, and covers itself with its own leaves: and yet, of all flowers, yields the most delicious and fragrant smell. Such is humility.

THE *blemishes* of great men are not less blemishes; but unfortunately they are the easiest parts for imitation.

"Perseverance, if not a mark of genius, is at least one of its practical adjuncts."

From the American Stock Journal.

BRAHMIN CATTLE.

MR. EDITOR:—Never having read any account in your excellent journal of the Brahmin or East India Cattle, sometimes called the Nagors stock, and knowing they have considerable claims, I feel disposed to lay before your readers some of their merits, and perhaps may cause inquiries to be made concerning them, which I feel assured will result satisfactorily to those desiring information.

The first Brahmin cattle, consisting of a bull and cow or heifer, were imported by Dr. J. B. Davis, of Charleston, S. C., in the fall of 1850. They remained in Charleston about six months, prior to their departure overland for the stock growing regions of Kentucky. They arrived in Kentucky about the middle of July, 1851, and were visited and admired by numerous persons, among whom were many cattle breeders. Some of the latter, I think, feared the Brahmins would encroach upon what they seemed to consider the exclusive right of the Short Horns to the "blue grass region." About the middle of the following month, my father and myself purchased the pair, at a cost of \$4000, and were laughed at by many of our old acquaintances for purchasing such stock, unacclimated, untried, and unestablished as breeders, in a country where all the prejudice that was entertained against any stock was brought to bear upon them; but soon we had bred the bull to some ordinary cows (as no one who had thorough-bred Short Horns would think of breeding from him), and the calves proved large, well-developed and thrifty, yet "a long dark night" ensued, before we established the half-bloods, which we finally accomplished, by almost forcing them upon many who wished to improve their stock south, and had tried Durhams time and again, when it was well known they would not live in that climate, and the half Brahmins would breed, thrive, and grow to a large size.

In less than two years from the dropping of the first calf, the demand was greater than could be supplied from the get of one bull. There being no other in the United States, the only alternative was to raise the price of calves, which was accordingly done, from \$100 to \$150 and \$250. We have since sold single animals at public sale as high as \$510. The qualities of the half Brahmins are large size and thrifty growth—we had a bull calf which weighed, at the age of four months, 485 pounds; at five months, 603 pounds—a gain of 118 pounds in thirty days, or nearly four pounds per day; we sold him before he was six months old, consequently cannot say how large he would have grown. Another, belonging to Mr. Holland, of Lexington, at the age of five months, weighed 580 pounds; at ten months, 1065 pounds, and up to two years old, Mr. H. offered to weigh him against any bull in Kentucky of same age for from \$100 to \$1000. These calves were but the common get of the Brahmin bull. The heifer showed fine milking qualities, the quantity being about an average of common stock cattle, while the quality was far superior to any I have ever known, unless it was some which only gave a very small quantity, as the Alderneys, for instance.

Mr. C. G. McHatton, of Baton Rouge, La., has, upon his farm, in St. Louis county, ten cows, half-blood, that will give more milk in quarts, that will make more pounds of butter in any given time, than ten cows of any other breed, upon any farm.

For beef, we have certificates from several gentlemen, saying, "in all the qualities which distinguish a good from an inferior article, we do not hesitate to say it is pre-eminent." For working cattle, I will only refer to "Sweatt on Cattle," or "Martin on the Ox."

After about six years successful breeding (during which time we sold nearly \$10,000 worth of calves from the old bull), we sold the original pair to Mr. McHatton for \$4,240, who now has a large number of half and three-quarter bloods, as well as all the full bloods in the Union, excepting some imported by Mr. Huffnagle, of Penn. (our Consul for twenty-five years in India); of one of these (a heifer), Mr. McHatton owns one-half, and has her upon his place to breed from the old bull. His full-blood stock consists of the pair of old cattle, two heifers their produce, one yearling bull calf, one bull five years, and one two years old, and the Huffnagle heifer, three years old. His stock of Brahmins could not be purchased for less than \$25,000.

So much for Brahmins; which, if you think worth laying before your readers, you can do so. I have said more than I at first intended, but not more than the merits of the stock warrant.

Respectfully, &c.,

H. A. EADES.

From the Country Gentleman.

FACTS ABOUT WOOD.

There are many curious and important facts connected with this theme, and it is one that furnishes ample material for a noble essay. Beginning with the tree in its first stages of growth—following it through its whole course of life, until it is cut down and used as fuel or timber—all this, we say, presents a study at once curious, attractive and useful. But this is not our purpose. Let us look at a few facts about wood.

The Hemlock is a soft wood, and when a shrub, forms one of the most delicate and graceful trees for a lawn in the whole list of evergreens; and we wonder why it is so seldom spoken of or recommended. Its grains are very coarse, the solid part being the same thickness as the porous; which is a noticeable fact in all wood—one being of the same thickness as the other. When hemlock is cut for firewood, it is utterly impossible to split it up, unless the axe is struck into a knot, when, however large or tough the stick, it will fly open like an acorn. Hemlock knots will break and turn the edges of axes, when no other wood will—not even the hard rock-maple or beech will do it.

In trees which grow in tropical climates, the grains cannot be discerned unless by a microscope, the growth being gradual and continual—not growing a season and resting a season, as trees do in high latitudes.

Cedar is the most durable of known wood, and black ash the next so. Posts of the red cedar have been found to be in a good state of preservation af-

ter having been in the ground for fifty years. Fir will make good rails, lasting a number of years.—Poplar, if cut in December, and the bark taken off in June after, will last fifteen or twenty years. It is a light wood when seasoned, and easy to be made into fence.

Much depends upon the season at which wood is cut, in order to its preservation; and at what time timber *should* be cut, is a question involving too many principles to be mentioned in this place.—Old people are apt to say much about the time of the moon, signs, &c., but whether or not the moon *does* have any influence over such matters, has always been of much doubt, the opinions of scores of men older than ourselves to the contrary notwithstanding.

White, or rather gray birch, is a wood of but little substance. It is a good wood for the fire, but for fence it will all rot down in one year. Many times we have cut them to be burned on the ground, and in less than a year, or before we were ready to set fire to them, they were nearly rotten. One day in spring, in the year 1848, we cut a small white birch, trimmed it out, and placed it upon a fence close by our farm road leading from one field to the other. Year after year we passed by, and it kept its *post*. In winter and in summer, exposed to the rains, snows and sun, yet it remained as sound as when first cut. Eight years after, and in passing it one day, we struck into it with an axe; it was as sound and hard as a horn. This is the only instance where we knew a sapling white birch to last more than one year. There was *something* to it, *somehow*. Was it in the moon, or the time of cutting?

An old gentleman, a man of close and long experience, once told the writer, that if bushes were cut on the dark of the moon in August, with the sign in the heart, they would never sprout. He said that those two only come together once in a great many years, and when they did, whatever bushes were cut at that time would die out. We looked in the almanac, and found that it came so on that month, the year he mentioned it to us. It was in the midst of our harvesting, but we left it, and engaging as many men as could be found out of employment, we went into it. We cut the bushes, and what was the result? In a month *every stump* had sent forth new sprouts around its roots, which came to be two or three inches long before winter!

Firewood is worth double, and will furnish that amount of heat greater, if seasoned under cover, than if seasoned out of doors.

In Australia, the trees shed their bark in the fall, and not their leaves. As to varieties, they are entirely different from any found in our own country.

LANE.

THE COTTON CROP.

The cotton trade of 1859 was without a parallel for magnitude in its whole history. Notwithstanding the American crop of 1858-59 was much the largest ever before grown, it found a ready market, at prices averaging more than a cent a pound above the average of the preceding ten years, and gave confidence in the opinion that a crop of four

millions of bales is necessary, considering the enormous consumption, to secure even a moderate reserve against the chances of a partial failure of the next crop.

The exports to Great Britain were 2,098,000 bales, being 235,000 in excess of any former year. The imports of cotton into Great Britain from countries other than the United States, were—East Indies, 511,000 bales; Egypt, 100,000 bales; West Indies, 7,000; and Brazil 118,000. The average weekly consumption was 44,115 bales, and the chief difficulty seemed to lie in the inability to manufacture, rather than to find customers for so vast a quantity, for, notwithstanding spindles and looms were pushed to their utmost immediate capacity, they were not able to supply promptly the constantly pressing demand, even at prices above any former period for twenty years. In 1856, there were in the United Kingdom 2,210 factories, running 28,000,000 spindles and 296,000 looms, by 97,000 horse power. Since that period a considerable number of new mills have been erected, and extensive additions have been made to the spinning and weaving machinery of those previously in existence.

The exports of cotton to France during the past year amounted to nearly half a million of bales, and the amount will probably soon be doubled, as on and after the first of July next the duty—now about two and a half cents per pound—is to be entirely abolished, and all prohibitions are to cease after October, 1861.

The quantity of cotton used in the United States last year, was 927,651 bales; the year before that it was 592,262 bales. The number of cotton factories in the United States (says the report of the Boston Board of Trade) will be shown by the next census to be about 1,150, with a capital of \$85,000,000, using \$45,000,000 worth of cotton, and producing \$80,000,000 worth of goods. The increase of machinery during the past five years has been very small. Though there are more textile fabrics manufactured per head in the United States than are consumed in any other country, we import the whole of some kinds of cotton fabrics; in all, not less than seventeen millions of dollars. During the next five years, a considerable advance will be made in remedying this deficiency, and it is estimated that in 1880, the cotton crop of the United States will reach ten millions of bales.—*American Quarterly Journal of Agriculture.*

RUTA BAGA.

While the leading crops of the farm, corn, wheat, and tobacco, generally receive the attention to which their importance entitles them, we think that more care might be bestowed on minor crops, which, though not possessing a money value, contribute not a little to the economical management of some kinds of domestic stock. A patch of turnips of greater or less extent, is seen on every farm; but as a general thing, when that is said, all is said.—The turnip is indeed useful for many purposes; and when raised in abundance, they will save a corn in the feeding of hogs intended for the pen, and add greatly to the supply of milk and butter, by being

in the spring bed to grow. But the common turnip is very inferior in nutritive qualities to the ruta bage, while the latter is much the most productive, and requires but little more trouble in raising. The chief difference is, that it requires a longer season.

To have the full benefit of the season, the ruta bage turnip should be sown in June. We are aware that good crops are sometimes made when the sowing has been made as late as the first of August, but success under such circumstances is dependent on continued favourable weather, and a late open fall. Even then the roots will not be of large size, but winter planting may make up for the deficiency. But July is generally the best month in the year; and besides, it is the one when the farm work is most pressing. It will often happen, therefore, that the preparation of the ground, if postponed till then, will not be thoroughly effected. I am, on the contrary, in a mood of freedom, and there is no difficulty, in regard to season, in having a piece of land readied to be planted at almost any moment before the commencement of next harvest. The young plants may then be well watered for ten days and ten days after harvest. A acre of ground will yield from 500 to 1000 bushels; and it is believed that the same amount of labor cannot be more profitably bestowed on any other crop to be cultivated on the farm. Turnips, in the fall and winter, supply the place of grain. Fed to such cows, especially if boiled or steamed, they largely increase the quantity of milk; and they are no less valuable for pigs, prepared in the same manner, previously to their being put in the pen to fatten. It is curious, we fear, that small matters are not much regarded by farmers in their anxiety to raise the largest amount of money crops, and we would commend this subject to their consideration. Let them now turn about for a while, and improve it without delay, so as to be in readiness when the proper time comes for planting. *Farmer's Journal.*

HOG CHOLERA—Kentucky Premium.—After all the discoveries of late years for hog cholera, the case continues as fatal as ever. Here is an offer from Kentucky, and any person who thinks he has the secret of the milk in the cholera, can send the statement of the fact, addressed to the Governor of Kentucky, at Frankfort, according to the regulations, which we copy from the *Paris Citizen*:

The last session of the Legislature passed a law, offering a reward of one thousand dollars, to any person who may discover and make known the true cause of the disease called hog cholera, and a remedy that will cure the same. Any person who shall claim to have discovered the cause of said disease, and a remedy that will cure the same, may set forth the same in a written memorial, and the fact of his having discovered the cause, together with such facts as will tend to show that an inquiry into the matter is worthy of being pursued, which memorial shall be presented to the Governor, who shall refer the same to two skillful physicians, one practical chemist, and two practical farmers, to be appointed, whose duty it shall be to examine said memorial, and satisfy themselves, by thorough investigation,

of the truth of the same, such as will leave no doubt upon their minds, that the true cause of said disease, and a remedy that will cure it has been found; and the result thereof, together with their opinions as to whether the cause of said disease, and the remedy therefor will cure the same, has been discovered, shall be submitted to the Legislature and passing, for their approval or disapproval; and if approved, an appropriation shall be made for the payment of the reward.

Sheep and Ticks.—Wm. P. Chase, writes to the *Agriculturist*: "In the January number, page 21, I express a doubt as to the efficacy of sulphur in expelling ticks from sheep. I have no doubt, I know it will do the thing much more efficaciously and with much less injury to the sheep than the arsenic made. I have practiced of dipping them in a decoction of tobacco, clove, etc. Since 1844 I have used no other preventive to keep ticks from sheep, or lice from cattle. My mode of feeding is to have boxes about 1 by 1½ feet square, with sides about 2 inches high: mix as much flour of sulphur with salt as can be made to stick to it, and put in the boxes for sheep or cattle. Feed it any time, but particularly in warm weather. Since 1844 I have seldom found half a dozen ticks to the head of a sheep at shearing time, and some seasons none.

I think feeding sulphur a great help in keeping clear of the fever-rot. My sheep have neither ticks nor fever-rot, although there is much of it near, and around me.

Foundering in Horses.—The foundering is a shrinking of the muscles of the shoulder, usually caused by a sudden strain in drawing, or by alighting hard upon the fore feet after a jump. We have had considerable personal experience with this difficulty in horses. If taken fresh, it is best to bleed the horse in the leg from the vein on the inside of the arm, called the plate vein, which will allay the inflammation, but for an old case this is nearly useless. Also poultice the horse, and apply fomentations upon the shoulder blade, and the inside of the arm. In all cases, take off the shoes, and give the animal rest in a pasture, or on a dirt bottom in a large stall. If the case is not of too long standing, it is well to rub the shoulder with penetrating oil, like oil of spike. Our practice was to rub with a camellia, and hemp crash cloth. When once seated, be careful of overexerting and cooling off, as you would for a case of founder. A long rest in the pasture is the best remedy we ever tried.—*Southern Cultivator.*

To Kill Cockroaches, Ants, &c.—Equal parts of dry red lead and sugar, well mixed, is given as a certain and sure exterminator of cockroaches, black and red ants, and other pests. As every household is more or less plagued with these vermin, this recipe, so easily provided, should be tried. This simple mixture should be put in places infested by them. Care should be observed in the use of it, as the lead is poisonous.

The Farmer and Planter.

COLUMBIA, S. C., JUNE, 1860.

HINTS FOR THE MONTH.

It will require something more than a hint to draw a man's attention, during this month, from the cotton field; but, as the old adage runs, "Hints are as good as a knock-down to a blind horse," so we will make the effort.

Cotton.—Bring it down to a stand as soon as possible, so as to encourage the growth of the lower limbs, and secure a bunchy stalk. Let your cultivation be shallow and rapid, forcing the early maturity as much as possible.

Corn must not be neglected just now. The usual hindrances of the harvest are apt to force a neglect of the corn and cotton at this period, and it requires no ordinary work or seasons to recover the lost ground. But do not give up your corn; it is a very scarce article, and every year becoming a more precarious crop.

Wheat.—Whenever it is ripe cut it down at once; don't wait for a little more leisure time—it won't come. It is safe to begin when the wheat is in the dough state, if the weather is favorable. Let your plat for seed stand until dead ripe, and pick out of it all cockle, cheat, &c. Whenever it is dry enough to house, drop everything and do it at once; just as easy to do it now as any other time, if you will think so. It is a crop made, and it will be bad economy to risk the loss or damage of it. Stack or house your straw and chaff before rain falls upon it, sprinkling salt amongst it. There is no mistake about its being good food for stock, when it is properly taken care of. Thrash your wheat as soon as you can spare the time, and *sun* it. Put seed wheat away in a close box, sprinkling lime amongst it, at the rate of one bushel to fifty, to protect it against weevils.

Oats.—A failure pretty generally. The wet and freezer of last winter, added to the drought of spring, have done the business. We should adopt all the substitutes in our possession. *Sorghum* can be sown up to July, and make good food on rich land for horse or hog.

Pear may also be planted. Corn may be sown broadcast on rich lots. Millet, clover, swamp grass, and everything fit for food, should be looked to.—One can never have too much of such things at command. We rely too much on the corn crib.

Potatoes you cannot have too much of. They are good food for everything. Set out your draws at every season, and work them well and rapidly.

NEW SERIES, VOL. II. 23

Stock.—Salt sheep, hogs and cattle regularly, adding a little sulphur now and then, and see that they are kept together. A rambler now will soon belong to somebody else.

THE CROPS.

"From all quarters we have the most cheering news of the crops. Fine stands of corn and cotton—and everything giving assurance of a large yield."

This is the usual stereotyped statement which may be found going the rounds of the newspapers at this season. Could anything be more preposterous than to base the certainty of a good crop upon the appearances at this season of the year? Planters are not particular enough upon this subject.—They ought not to allow the statistics of the country to be settled by Yankee drummers, itinerant scribblers, or Railroad newspaper correspondents. They should take the matter into their own keeping, and see that the truth and nothing but the truth is told in their own organs—the agricultural papers of the country. We entreat gentlemen who feel an interest in having the true state of the agriculture of the country before the people to contribute to our columns all matters of interest during the coming season. We want light. Let us have the results of your experiments with manures, with new implements, new modes of culture, new varieties of plants. Let us have hints at the seasons, their changes, their influence upon vegetation—in short, upon all matters touching the improvement of our profession.

HOME MANUFACTURES

One of the most cheering indications of the times is the general interest now evinced in home manufactures. A day hardly passes in which we have not some evidence of improvement among our own mechanics.

It is now no uncommon thing to find a Southern name on the patent list, and we may safely look forward to the day, as not far distant, when we will have implements made at our own doors, by our own mechanics, and adapted to the wants of our people, and the habit and capacity of the negro. We have just been examining a cast mould-board turn-plow, (one horse,) made by D. H. & E. E. SMITH, of Spartanburg, enterprising and self-made mechanics, that does remarkably good work. It is of very light draft, and turns a beautiful furrow slice.

We also saw tested a subsoil plow (wrought), made by the same, which performs admirably.—These gentlemen have received premiums at three of our State Fairs. They have made improvements in the adoption of a cast mould-board, as well as other matters, and on the 3d April last, obtained a Patent. These gentlemen deserve encouragement, and we hope will receive it.

A plow may be seen at the office of the *Farmer and Planter*, and several will be deposited on sale at Messrs. ALLEN & DIAL.

It is the wish of the manufacturers to have them fairly tested, and stand upon their own merits.

THE SOUTHERN CULTIVATOR AGAIN.

"He must have optics sharp, I ween,
To see what is not to be seen."

The "H." editor of the *Southern Cultivator* has lost his temper in reading our strictures upon some of his lucubrations, and charges us with personal allusions, and want of editorial courtesy.

As we have not the slightest personal acquaintance with the editor, the assumption is purely gratuitous. As to the second "count in the indictment," being an "anonymous editor," we might be allowed to plead ignorance, but we are not in the habit of weighing our words in drains and scruples, and have yet to be convinced that the opinions of an editor are to be a whit more tenderly dealt with than those of any other gentleman, who has a fancy for making his opinions public property. The *Cultivator* claims to have a large circulation in South Carolina. It was for that reason only that we took notice of it; it became a part of our duty to defend our own State against unjust assertions, and her sons against the charge of advocating heresies. The columns of the *Cultivator* show that there are in Georgia, a good many strong-minded men of the same way of thinking.

The editor has only taken advantage of the common artifice of those who have the worst of the argument, and we would by no means deny him the right of retreating under the "panoply complete" of a sadly misrepresented individual.

We can assure the editor, however, that whenever we offend a gentleman, by personalities in our columns, our name will be at his service—not to fight, but to make the *amende honorable*, an apology.

A PLAIN TALK.

Our readers will doubtless be gratified by the increasing interest taken in our Journal by the low-country planters.

Our columns have been graced by several admirably written articles on the subject of tide water agriculture, and we have the assurance that our journal is growing in popularity and usefulness.

The surest way to make it so is for practical planters and farmers to contribute to its columns the fruit of their experience. We want light—we want facts. The world is running a race upon hobbies, and it is important to know who wins the prize.—Every new theory advocated, never so ingeniously, every new fertilizer puffed and certified to, "*ad sus-*

pieionem," as lawyer F. had it, cannot be true; and the only way to reach the truth, and save planters from imposition, is, for the result of all fairly conducted experiments to be published. The character of the soil, and its former and present treatment should be particularly stated. There is a great deal more in the mechanical treatment of a soil than most people imagine. It is no uncommon thing to see pretty good crops made by one man, upon a poor soil, while his neighbor makes less and uses more manure. Communication has a vast deal to do with productiveness—some soils are always to be found in a condition easily prepared for the production of crops—others require an immense amount of labor, and often, after being put in good condition, they, by one hard rain, may be so "run together" as to require as much labor as ever to put them in condition again.

A soil may look "dead poor," and yet contain such elements as, by the addition of guano or super-phosphate, will make it yield astonishingly, while another may look "pretty rich," and show no benefit from the application of the same fertilizers. We have in vain looked for soil analysis to explain this mystery; but, so far as the practical results interest us, we may arrive at them by experiments carefully made.

Chemists have told us that certain preparations were the very ingredients necessary to restore the lost fertility of our soils. A. reads the figures, foots up the column, and sees as plain as day-light, that he can make by the operation. He buys super-phosphate, applies it carefully, and is never able to see any benefit from the application. B. tries guano, and is very successful. C. tries guano, and fails, while super-phosphate does wonders for him. We had a conversation with an intelligent planter a few days ago, who affirmed that he could not see the slightest benefit derived from the application of Rhodes' Super-phosphate or Mape's, yet guano paid him handsomely, on the same field, with the same seasons and same cultivation.

We insist upon the publication of these experiments in the *Farmer and Planter*. As the matter now stands the planter is at the mercy of the manufacturer of commercial fertilizers—but one side of the story is ever told—he publishes his successes, not his failures. He publishes the analysis of a chemist. What guarantee have you that the article in the market is the same? It is all gammon to talk about character at stake, and all that—imposture is too much the fashion of the day to be a buggerboo to a man in need of money. Nor is this all—the agents of these fertilizers are legion, and lend their name very often (and no doubt many believing they are right) to puff the manures. In like manner the editors of newspapers, by publishing a puff, paid for

as an advertisement, and written by the manufacturer or his agent, under the editorial head, endorse an article of which they know nothing, and may do a deal of mischief.

We feel as deep an interest as any of our readers can in finding a "standard manure," and will most heartily endorse it when we find it; but we are not inclined to believe everything because it has been published in the papers. Let us have the other side—let us hear from the failures—rise, gentlemen, and hold up your hands. Planters and farmers protect one another—you can do incalculable good by speaking out. Send in your experiments.

The publisher would also make acknowledgments for the great interest taken in the journal by the planters of the lower part of the State, in procuring subscribers. In Georgetown, Williamsburg, Marlboro', Beaufort, Darlington and Charleston Districts, our subscriptions have increased far beyond our expectation, while in many of the other lower Districts a better feeling for our enterprise is evidenced, by a greatly increased number of subscribers. On the other hand, we regret to state that the patronage from the Upper Districts have greatly fallen off.

UNRULY ANIMALS.—As a general rule, our domestic animals are never unruly, except when taught to be so. For instance, some persons, in turning back from one field to another, only let down a few of the top rails or bars, and force their animals to jump over. Too lazy to put up as well as to let down, they leave the gap half closed, as a temptation to the stock to jump back again. A few practical lessons of this kind make animals unruly.—Carelessness in regard to putting up fences when thrown down, or in repairing weak spots, confirms the habit. A writer says his practice has always been to teach his cows, calves, sheep and hogs to go through or under, rather than over the bars and fences, always leaving a rail or bar up at the top.—Taught in this way, they never think of jumping, and he has never been troubled with unruly animals, even when his fences were low.

The good sense of the above extract, clipped from some of our exchanges, cannot fail to strike every reader at all conversant with farm matters. When you hear a man fuming over his losses by the depredation of stock, you may conclude, nine times out of ten, that it has been the result of carelessness.—The most quiet animal soon learn tricks. Negroes have a proclivity to leave fences down, to leave gates open, and draw-bars out of fix. Keep your top rails always up, if you wish to keep the jumping propensities down.

There is no truer adage than "bad fences make bad neighbors." The best of friends will fall out over hogs in a corn field or cows in a cotton patch. Timber, it is true, is scarce, but all domestic animals are valuable, while peace is more so.

GULTIVATION OF THE BASKET WILLOW.

We have, from time to time, through the columns of the *Valley Farmer*, and other publications, urged the importance of the cultivation of basket willow for home manufacture. In almost every town there are Germans, and others, who are practically acquainted with the various forms of manufacture of this article, and so great has been the demand for the raw material by these, that large quantities are every year imported from Europe, notwithstanding the considerable effort that has been made in various sections of the Union to produce a supply at home. The various kinds of willow grow kindly and rapidly in our country, and there are thousands of acres of our Western lands so low and wet as to be of but little value for any other crop, upon which willow may be grown to the best advantage.

The value of the willow-ware manufactured annually in the United States, amounts to some hundreds of thousands of dollars, and much of this is manufactured from imported willow, the freight and commissions on which are nearly equal to the actual cost of growing the article at home, while the imported article is often inferior to that of our own growth, because it is liable to become soiled in handling, and from exposure on shipboard, and in store.

We have, for many years, grown the best kind of willow in Kentucky. It grows with such luxuriance as to require but little cultivation after the first year. It is propagated from cuttings with as much certainty as any seeds of grain may be grown. A working with the plow, cultivator, and hoe, a few times, is all the cultivation that is necessary; for when the plants become established, the ground is so much shaded that few weeds will grow among them.

For coarse baskets, for farm or other uses, the unpeeled willow is superior to any other material, while the finer portions of the crop can be peeled and wrought into baskets of a better quality.

The increased culture of fruit for transportation by railroad, requires an immense number of baskets, and this demand will continue to increase as this important branch of horticulture increases with the demands of the population and the increasing facilities for marketing.

Last summer we paid a visit to the farm of Col. Colt, the famous manufacturer of the pistol of his name. His farm is situated on the Connecticut river, perhaps a mile below the city of Hartford, and is enclosed by a heavy dyke, to prevent the overflow of the river. This dyke is protected by thick-set rows of willow. The crop of the past season will amount to forty or fifty tons. Offers have been made by dealers in New York for the purchase of the whole of it; but Col. Colt has concluded to add to his other manufactures that of willow-ware, and he is about erecting buildings for the purpose. Besides the willow grown upon the dykes, he has seventeen acres of land established in this crop, and in the spring will add fifty more, and will give employment to eighty or one hundred men in its manufacture. At the time of our visit to his farm he had thirty acres in seed-leaf tobacco, equal in luxuriance and beauty to any that we have ever seen in Kentucky or elsewhere.

There are thousands of acres of wet land in the West that might be devoted to the growth of willow, giving employment to hundreds of workmen in

the manufacture, and all find a ready market in the cities and towns at home.—*Valley Farmer.*

How many acres of land well adapted to the growth of willow in the Southern States are now devoted to frog-ponds? How many millions of dollars—yes, millions—are annually paid for willows imported from France and Germany, to be worked up into all manner of cunning devices by the nimble fingers of Yankee girls for the Southern trade, while our own women are knitting stockings and wearing homespun at a cost equal to throwing their labor away. This is one of the branches of industry that would pay in more ways than one. It would convert that which is of no value into an article of great use and value; it would give strength and comfort to the rural population: it would prevent their emigration, and thereby increase our population, our wealth, and our independence: it would give employment to children and to women both healthful and profitable, and would introduce a new element of wealth.

For the Farmer and Planter.

WHO CAN CURE THE HORSE?

R. M. STOKES—*Dear Sir:* Believing that your experience and facilities have enabled you to know something about nearly all diseases that domestic animals are subject to, together with the remedies best to apply, I have concluded to write to you for some information in regard to a lame horse that I have; a description of which I will give:

I traded for the horse about two months since. He was a little lame then, when first taken out of the stable in the morning, and the joint above the hoof, on the left leg, would swell some. I supposed that standing up in the stable was the cause, and that exercise would help him; consequently, I worked him to Camden, to the wagon—30 miles. One day after his return, his leg swelled up, from the hoof to the shoulder, and he did not walk on that foot any in three weeks. About that time it broke, on the side of the joint, above the hoof, and was a running sore for about two weeks. During that time I did nothing for it, except rub with Mustang Liniment, and poultice it. In a week or two after it had healed up, the leg came down to its natural size, except the joint, which continued large, and very hard. I have used Mustang Liniment—bathed with Mullin and Poke-root liquors, and rubbed it with Iodine—*all* of which appears to do no good. His health appears to be good in every other respect; and, when not made sore with applications, walks tolerably well on that foot. The joint is not entirely stiff, and the enlargement is mostly on each side of the joint.

If you can suggest any remedy that will remove

the swelling, or enlargement, either by letter or through the columns of your journal, it will be thankfully received; and if your remedies succeed, I will report the same to you, which will make an item of interest for your journal.

Hoping to hear from you soon, I am

OSBORN FLOYD.

Newberry, April, 1860.

REMARKS:—The symptoms in the disease above described by Mr. FLOYD, are, in some respects, new to us. At first we supposed it to be “scratches,” but the swelling extends too far above the hoof for that. We, however, would suggest that our friend has a pretty severe way of *exercising* a lame horse. We don’t wonder that the animal “did not walk on that foot any in three weeks,” after taking the severe exercise of “30 (probably 60) miles to the wagon.” Had he been turned into a pasture for a few days, we believe it would have been beneficial. We understand that Mr. J. B. HAIR, of Lexington District, has a horse affected in exactly the same way. Mr. H. purchased his horse from a Drover, some time in January or February last; and, it may be, that both horses came from the same Drove.—If so, there is some ground for suspecting the disease to be infectious.

Will some of our readers, who are better acquainted with the diseases of the horse than we, enlighten our friends, by giving us a remedy?

For the Farmer and Planter.

CORRESPONDING OBLIGATIONS.

MR. STOKES.—The obligation of every member of society to patronize those who patronize him, to foster every honest enterprise which contributes to the prosperity of his own profession, will be every where acknowledged as the ground work of success.

The prosperity of Columbia depends mainly upon her commercial success, and her merchants are dependent upon the country trade—in other words—the agricultural interest keeps the wheels of commerce moving. Now it is my interest to buy where I can buy cheapest and where I can get things adapted to my wants—it is my interest to patronize Columbia, if her merchants can supply me with such articles as I need, on fair terms, because she is my neighbor—one of my best customers, consumes my flour, bacon, butter, eggs, beef, chickens, and in fact any thing I have for sale. The merchants of Columbia should foster this spirit; they should do all they can to keep up a constant intercourse between the country and city, by offering us a good market for our produce and selling us goods at fair prices. But, how am I to know, Mr. Editor, where to go to. I am no politician and don’t take or read political papers and as I see by your paper that you have a

circulation of 3,000, I reckon that there are a good many in the same box as myself.

I was going down to Columbia a short time since, to buy some necessaries, and I took up the *Farmer and Planter*, to find out some of the merchants. We country folks always like to look up the "cheap cash stores." I was surprised to find so few names, but I don't regret it now—for I found all the gentlemen I called on very obliging and anxious to make me feel it was my interest to come back again. Allen & Dial seemed to have nearly every thing in their line, and I found there some of the best shovels (plantation) and other agricultural implements on very fair terms, and expect to try them again.

Falls & Kinard fixed me up nicely in some articles in their line, and they tell me that they do a large planter's trade.

At Mr. Mordecai's, I got some very good things, and the "spiced oysters," I brought home will sell him many a one. The tastes of good things a fellow gets there, are worth something. Then I found my way into Mr. Hope's, and drove a bargain or two there, beneficial to both of us. Then I turned into Mr. Fullings', and came out new all over, and looking so nice, that the old lady did not know me when I came home till she put on her specks—said she could not tell for the life of her who that was coming up the lane.

I was very anxious to get a look at Mr. Gibbs' Factory, but had'n't time—but I think he is doing more for the country than any body about Columbia. I shall be sure to send down my wool—now's the time to build up home industry and encourage enterprise.

At Mr. Bowers' I found some very nice furniture at fair prices, and laid out between fifteen and twenty dollars.

At Mr. Townsend's I bought some Books and paper for the youngsters, and the old lady thinks I got every thing on very good terms.

J. M.

The publisher returns his thanks to his country friend for the above hints. If he will look at the May No. of our paper, he will find that even some of the names he has mentioned are not now to be found among the advertisers.

Of course it is our interest to do a large advertising business, and as it seems to pay elsewhere, we think that merchants would make by it here. This is a free country, however, and every body has a right to judge for himself. A comparison of the rise and progress of Augusta with Columbia, and a glance at her advertising list might be instructive. The *Cultivator* contains some 25 pages of advertisements, the *American Farmer* (Baltimore) has about 50 pages,

the *Montgomery Cotton Planter* about 20; while nearly all the rest have from 10 to 15 pages. We have no wish to interfere with the daily or weekly press, but we think that, as a planter's medium, not apt to be torn up or lost, with 3,000 subscribers, our Journal offers some inducements.

THE VINE GROWING CONVENTION.

We most heartily comply with the request of the Committee to insert the following circular to the Vine Growers of the United States, and hope that their efforts to disentangle the Grape mysteries may prove successful. It is very important that the identity of many varieties should be settled—that the varieties best adapted to various soils and climates should be decided upon. The character of the gentlemen constituting the Committee, is a sufficient guarantee that everything will be properly conducted.

TO THE VINE GROWERS OF THE UNITED STATES.

At a late meeting of the "Aiken Horticultural and Vine Growing Association," it was

Resolved, That a Committee of five be appointed to open a correspondence with the various Vine Growing Associations in the United States, and to ascertain the practicability of holding a Vine Growing Convention, in Aiken, some time next summer; and if found practicable and expedient, that the Committee take such measures to secure this object as they may think proper, and that they report the result of their proceedings to this Society, at its meeting in May next.

The following gentlemen were appointed the Committee: Messrs. A. DeCaradeue, Chairman, McDonald, Ravenel, Redmond and Wood.

It is perhaps proper to state the object of the Association, in proposing such a Convention, and to point out a few of the advantages to be derived from it. In the first place, it is necessary to come to some understanding about the names of the Grapes, now under cultivation, as it is evident that great confusion exists in that respect. Most of the vines being known in different places by different names: the Black July, for instance, having five synonyms. Thus it often happens that a Vine Grower reads or hears great praises of a Grape whose name is unknown to him, and a description of which tallies with none that he has; he procures it at great expense, cultivates it with care for two or three years, and ultimately discovers it is identical with some other he has had a long time. This is discouraging, and has deterred many from procuring new and valuable varieties, which it would have been advantageous to have cultivated more or less extensively.—This difficulty can only be obviated by a Convention

such as is proposed—the best written description never being so lucid as to convey an exact idea of a fruit.

The meeting will take place at a season when the fruit at the South is ripe; all who attend are invited and requested to bring samples of their Grapes, ripe if possible, and green if otherwise, with a leaf and a piece of the wood, and names and synonyms attached. Those who cannot attend, are requested to forward samples as above. Thus, if we are assisted by the good will of a majority of Vine Growers, most of the varieties in the States will be represented; their qualities; names, synonyms, sizes, degrees of maturity, etc., will be compared, and a vast amount of invaluable information derived. Names will be agreed upon, accepted or rejected, with good authority. Persons will, also, be requested to bring or send samples of the wild grapes from their neighborhood in the same manner, that the different species might be finally determined upon, and each grape properly classed under its own head or type—an object of great importance to the Botany of the country, and, perhaps, finally, to the making of wine from them. We are daily getting additions to our list of natives, and unless a correct nomenclature and classification be at once made, we will be thrown into inextricable confusion, expensive and troublesome to the growers. Another object of the Convention is, to determine upon some manner of naming the different Wines. The present way of calling them by the name of the grape is in direct contravention to the established rules of wine growing countries. It has always been customary to classify wines by the name of a State, Province or District, with the brands attached to them, according to the name of the particular locality. Thus the general name “Wines of the Rhine” comprises many particular brands, such as Hockheimer, Johannesburg, etc., etc. Bordeaux wines include Chateaux Margaux, St. Julien, LaRose, etc. The reason for this is very obvious. The same grape will make totally different wines in different places. And, again, in most wine countries, (and we will, no doubt, adopt the same course,) the grapes are mixed. A wine made from a mixture of Catawba, Isabella and Warren, could not be called by either of those names.

At present we have a hundred different Catawba wines, no two of them alike. Hence, the propriety of rejecting the name of the fruit, in favor of the time-honored custom of naming after the State, District or River, with brands of private names or localities. Purchasers will then know at once what they are buying, and will not be prejudiced against Catawba or Warren wine, because they have tasted worthless Catawba or Warren wine.

Independently of the foregoing, the amount of information exchanged by persons, meeting in such a Convention as we propose, would truly be worth “Millions to the Nation,” and would tend more to develop that rich culture than all that could be written.

We call, then, upon all who cultivate the Grape, whether for the table or for wine, or who take an interest in the success of its culture, to assist the Committee in securing their object—a Convention of Delegates from all the Vine Growing Associations in the United States, and of private and separate Vine Growers. Let all who can come, determine at once to meet in Aiken, S. C., on the *Third Tuesday, in August next, (21st,)* there to assist in the good work—to compare their fruit, and exchange their views.

Aiken has been selected as being easy of access from all quarters—North, South, East and West—being, at all times, unexceptionable as to health, and a delightful summer resort for the neighboring cities, and well provided with ample accommodations.

Secretaries of the different Associations connected with the Vine Culture, would confer a favor by forwarding to this office, or to either of the gentlemen of the Committee, the names and localities of their Societies, and all other information they may think proper:

A. DECARADEUC, Chairman, Woodward, S. C.

Dr. J. C. W. McDONALD, Woodward, S. C.

H. W. RAVENEL, Aiken, S. C.

E. J. C. WOOD, Aiken, S. C.

D. REDMOND, Augusta, Ga.

February, 1860.

From the Cotton Planter and Soil.

HORSE TALK.

RECIPES FOR SCRATCHES AND COLIC.

DR. CLOUD—*Dear Sir:* I send you a remedy for scratches on horses. Wash the inflamed parts with warm soapsuds, then with No. 6, three times a day; keep him in a dry stable at night, and, in a few, he will be sound and well.

For colic in horses, take a half pint of No. 6, mix in half a pint of water; drench the horse; if not relieved, repeat the dose every two hours as long as any symptoms of the colic remain. When a man thinks his horse is about to die with bots, let him try the above remedy, and his horse will soon be relieved of colic. I never knew it to fail.

A RAILROADER.

“Everybody,” that ubiquitous individual, knows how to “doctor” a horse, and, of course, knows that no remedy save his own is a perfect “cure-all.” For scratches, a good coat of white lead, painted over, after washing, will be found often a cure.—The wild arsenic root, boiled in lard, is also an effectual remedy; but care should always be taken

to improve the animal's condition; also, by attention to his diet, condition of blood, and cleanliness of stables. Seratches, taken at the outset, are very easily cured; but when allowed to run on, and become almost constitutional, it is one of the most unmanageable of diseases.

The "Railroader" seems to be very confident in the virtues of No. 6. We have not been so fortunate in the use of it, and feel sure that we have seen horses very much injured by being strangled with it—leaving a bad cough, and other unpleasant symptoms behind. An ounce of asafœtida, in a quart of whisky, is an excellent remedy.

For bots, an excellent Horse Doctor tell us a lump of Indigo, (size of a hen's egg) either dissolved in whisky, or mashed up, or a ball, and administered, is a certain cure.

Infallibility, however, in all cases of colic and bots, seems to be claimed now-a-days for two table-spoonfulls of chloroform in a pint of whisky. But, rest assured of one fact, the ingredient oftener needed than any other, in horse physie, is an ounce or two of good common sense. Try and find out what is the matter with your horse before you begin to drench and worry the poor animal. Do not lend an ear to every babbler, but give what you think will relieve his sufferings. There are some very efficient remedies which will do the horse little harm—others which may do a great deal.

For the Farmer and Planter.

CONDITION OF THE CROPS.

MR. EDITOR:—I have, during the month past, travelled over a pretty large portion of the State, and it struck me that a bird's eye view of the condition of the country would not be without interest.

The "stands" of corn are generally good—remarkably good, when after cotton. In some localities the bud-worm has been very destructive on low grounds and cold soils.

Quere.—What is the "Bud-Worm?" Where does he come from? and what does he turn to? and does he hibernate, as many believe, in the stems of old corn stalks, in weeds, &c?

After all, may not our forefathers have been right in their practice of burning up all trash on the ground before planting; and do we make anything by allowing weeds, corn-stalks, &c., to enumber the soil? Don't call me an old fogey, Mr. Editor.

The stands of cotton are good—i. e., as good as could be under the season. It has been a very dry all over the State. All who broke up their land before the last heavy rains fell have found it turn up in clods, hard and unmanageable. I have seen a great deal of cotton planted on ridges, the bed not completed—bad business, I should say; but there

is no guessing what cotton may do. The cold nights and high winds have, so far, been unfavorable, but that can't amount to much if the hereafter all comes right.

Oats are a dead failure—Winter sown and all.—That cold snap in December, used up the Winter, and the dry weather for the last eight weeks will make a "case" of the spring oats, if the rust don't do it.

Wheat is unpromising—thin, very—bad stands, generally—low and spindling. I have seen but one or two fields of even ordinary promise. The late may come out, provided the rust does not strike it. There is not much chance for early varieties.—Above the cotton-belt it promises better.

Yours, A FARMER.

For the Farmer and Planter.

"PEEPS OVER THE FENCE."

"Seigneur, now, you talk of a *hobby-horse*, I know where one is—will not be given for a brace of angels."

[BEN. JONSON.

So it seems, Mr. Editor, that as far back as good old BEN. JONSON's time, people had a love for hobby-riding, and is it any wonder that this time-honored custom should still be indulged in—especially by gentlemen of elegant leisure? Now, there is my friend the Squire, who has rode all manner of fancy hobbies—fashionable hobbies, in the great world's thoroughfares, and has become, at last, utterly disgusted, *blase*, (as I heard a fashionable "*dem me*" compound of moustache and man-millinery call him,) that he has now resolved to turn his attention exclusively to horses and homespun, niggers and nubbins, hog and hominy, ears and cotton bales. You would be delighted to see how exquisitely he bestrides his hobby—how daintily he handles the leather—how he rises up and down, bobs, and re-bobs—how he turns up his nose at humbugs, and eschews everything but the truly practical—how everything he touches smells of the perfume and essence of true nobility. Everything is measured by dollars and cents, however, by many people in this world, and if a man can pile up the cotton bales, he can pass muster. And I have no doubt the Squire will yet pass for one of the best planters we have.

If Louis Napoleon had failed he would have been denounced as an arrant-fool; he succeeded, and, consequently, is "the greatest man of the age."—But I have another neighbor who rides a very different sort of a hobby; he hates everything which does not smack of work; he believes nobody can know anything about planting unless he follows the plow. He rides his hobby to excess; and if his neighbor C. makes a good crop, it's always the seasons, the guano, the manure, or luck, that did it.—

He would "give up the ghost" before he would adopt a new plow or a new seed, and you might as well try to convince him that the world turns daily round, as to make him believe that there is cotton better than the old Petit Gulf, or any plow better than a shovel. He stoutly denies that deep plowing does anything but ruin the land; while he insists upon it that the more you cut the roots, the better the corn will grow. He never has seen the sense of spending time to make manure; don't see how people ever get time to haul it out; don't think there is any strength in straw or chaff. P. is just as earnest a rider of his hobby, and as firm a believer in its easy movements, as any one, and, I have no doubt, will die in the faith.

And there is Col. O., just the opposite in character, and just as indomitable a rider. He never hears of a new plow, harrow, cultivator, a new seed, fruit, or flower, a new breed of animals, or new kind of fertilizer, but he pitches right in. And the beauty of it is, that he never sees his failures—he is always right—never makes a blunder; still, you may see the wrecks of all sorts of fancies about his plantation. Every shed contains some exploded theory—plows, hoes, harrows, are thrown aside as useless—not adapted to his purposes. But the Colonel is still sanguine, and sees in the distance certain success.

Now, Mr. Editor, if I could mix up these gentlemen in some social way, and get them to "see ourselves as others see us," I could do the State some service. But how can it be done? That is your hobby, Mr. Editor, and I don't envy you such a jolter. In a hurry, (I'm always in a hurry,)

SNUB.

OUR RAILROADS.

The progress and condition of our railroads forms an instructive chapter in *Stow's Capitalists' Guide and Railroad Annual*. It would appear that in nine years, or from 1850 to 1859, the railroads of the United States increased from 7,355 to 27,944 miles in length. In this period the increase in the New England States amounted to 62.74 per cent., while in the eight of the Western States the increase was 2,201.41 per cent. At the same time the former gained in population 16.12 per cent., and the latter 46.22. The total cost of the roads, up to 1859, amounted to \$365,451,070, of which large sum it is supposed one-third had been wasted in construction; yet, by their influence, lands have been advanced in value, and the speed of internal communication greatly augmented, and the whole country benefitted. There are at this time, 28,000 miles of finished roads in the United States, and about 16,000 miles either under construction or projected, requiring \$400,000,000 for their completion. It is estimated, however, that many years must elapse before sufficient capital can be diverted from other objects to carry them through. In the meantime,

many projected in a spirit of rivalry to other roads will be abandoned. It is calculated that that 20,000 miles of railroad are sufficient to do all the business of the country at the present time, and that 8,000 miles have been constructed, in part, in rivalry to other roads, which have proved a dead loss to stockholders, and, in the main, will pass into the hands of the bondholders. The average cost of railways per mile has been \$36,328. In the middle States \$40,919; in the Southern States, \$22,906; in the Western States, \$36,333.

The reason assigned for the cheapness of construction of railroads at the South is, that they were built on the cash plan. Among the net earnings, the Panama shows the largest returns, being \$29,564 per mile; and those earning the least, or nothing to stockholders, were found in Maine, Vermont, Mississippi, Missouri, Iowa, Illinois, New York, &c. The list of dividend paying roads comprises 78; among which two pay annual dividends of 12 per cent.; nine, 10 per cent.; two, 9 per cent.; ten, 8 per cent.; six, 7 per cent.; thirty, 6 per cent.; five 5 per cent.; one, 4 per cent.; one, 2½ per cent.; and one 2 per cent. The list of delinquent companies on stock or bonds amounts to 33. The total bonded debts of the American railroads, all of which mature between 1859 and 1874, amount to \$411,199,702.

No better evidence could be offered of the resources of our country than the elasticity with which we recover from great financial shocks. Only two years ago, and we heard the cry of ruin throughout the great West; it seems already to have been almost forgotten, and the people are giving evidence of a determination to wipe out the past.

The above extract on "our Railroads" is worth studying. We have evidently been suffering under a "monomania" on this subject; and the startling fact that "eight thousand miles of railroad had been constructed, in part in rivalry, and a dead loss to stockholders," should make us pause, and ponder well on the importance of calculating the trade, travel and development of new resources of wealth to be effected, before we begin new projects. Let us remember that more than one hundred millions of dollars has been already sunk in the construction of railroads, which add very little to the productive, capacity, or wealth of the country. It is high time that we were giving up the suicidal policy of constructing roads to facilitate our intercourse with the North, and add to its prosperity and our dependence. Let us build roads to bind our own interests together, and increase our own resources. The time is not far distant when we may need all our means and men.

TRACING PAPER.—Rub the paper with a mixture of equal parts of oil of turpentine and nut oil, and dry it immediately by rubbing it with wheat flour. Then hang it on a line for twenty-four hours. If washed with oxgall, and dry, it will admit of being written on with ink; or water-colors may be used.

Horticultural and Pomological.

WILLIAM SUMMER, EDITOR.

MONTHLY TALK WITH OUR READERS.

The beginning of this month is usually pleasant and delightful. The melody of the feathered songsters may still be heard, with all the freshness of early spring, while occasionally the clear liquid notes of the song sparrow, amid the thick leafy branches, the notes of the lark, soaring high in the air amid the fervid atmosphere, greet our ears. The music of birds was the first song of thanksgiving which was offered on earth, before man had a dwelling place, and it continues to charm the ear and delight the heart amid his varied toils. The swallows, annual visitors, remain until next month, and morning and evening are busy, as they skim through the air, destroying many insects, which are injurious and destructive to the gardens and fields. We bespeak a kind word for the birds, and look upon the man who prevents, as far as is in his power, their wanton destruction, as a benefactor to his race.

This month we begin to enjoy, in a great degree, the early fruits of the orchard. The Apricot, Plum, Apple, Pear and the Peach, give us a foretaste of what we may expect the next month, when most of the fruits are in great perfection. All should enjoy these comforts, so healthy and suitable to the season.

Prepare for a good crop of Turnips and Rutabagas. The end of the month Early Flat Dutch, and other table varieties, may be sown.

FORTUNES DOUBLE CAPE JESSAMINE.---(GARDENIA FORTUNII.)

Those who have seen this new variety of the *Gardenia*, grown in hot-houses, can form no idea of its regal beauty and magnificence in the climate of Florida. Here it is a truly glorious flower—vicing with the *Magnolia Grandiflora*, in the conspicuousness of its snow-white blooms—rich and luxuriant in growth, it is truly the *souvenir* of the Garden.—Its fragrance is exquisite—not so overpowering as the common *Gardenia*, and hence more agreeable to most persons. The leaf of this fine variety is 6 inches long, by $2\frac{1}{2}$ inches broad; the flower $3\frac{1}{2}$ inches long by $4\frac{1}{2}$ inches broad, independent of the corolla; the petals are $1\frac{3}{8}$ inches broad, rounded oval in shape. The flowers are very double, and consist of six circles of six petals each. I think if grown in large pots or tubs, and placed in cold pits during the winter, it would flower freely when placed in the garden, in the spring, as far north as Virginia. Heath mold or decomposed peat, vegetable matter, &c., is the best soil to grow all this class of plants in, and they should be furnished with an abundance of water.

Watula, Fla.

*

From the *Cincinnati*.

STRIPED BUG.—APPLE TREE BORER.

MR. EDITOR:—Year before last, I lost all my cucumbers and melons by the *striped bugs*, in spite of all my efforts to save them. I knew and applied all the usual remedies of chickens, lime, ashes, sulphur, tobacco, quassia, manure-wash, poudrette-wash, etc., but my ground was old and full of bugs, and the spring-wet, and all failed me, and I had no crop. But last spring, I determined to have a crop in spite of them; so I set my men to making boxes out of old boards, six inches wide, and cut and nailed together so as to make a box about one foot square and six inches high, without either top or bottom. These I intended to place over the hills then planted, and cover them with millinet, so as effectually to keep all the bugs off. This is an old remedy, and perfectly effectual, when done well, and objectionable only on the score of the cost, and also because the gauze interrupts the free flow of heat and air, and, to some extent, dwarfs and injures the plants. Well, as usual, when we came to plant the vines, one Saturday, I found the millinet had not been prepared: we were not, therefore, fully ready. But I thought I would have them planted, and the boxes set over them, as far as they were made, and get the millinet on Monday, and nail it on; but as we had been using some *common gas tar*, it occurred to me, after the men had planted the melons, that these striped bugs never fly down upon a sharp angle, without first lighting to get a new start and aim; and I thought that, if I should smear the upper edges of these boxes with the gas tar on hand, it would probably have two effects; first, tend to confuse the smell of the bugs, and, second, to repel them from their only place of lighting on the upper edges of the boxes, preparatory to their descent into the hill. I did this, and left them. Some time the next week, the boys came to me and said that the “bugs had eaten up all the melons again.” Remembering, then, that I had previously forgotten them, I hastened into the garden, expecting that all was lost; but, quite to my surprise, I found that, while they had eaten most woefully every hill that had no tarred box over it, not a single bug could be found in any one that had been so protected. I also observed that the plants within the boxes were much more green and thrifty than those outside, even if not bitten, owing to the box keeping off the cold wind, and concentrating the heat of the sun upon the hill.

I then took the other boxes made, and tarred the edges the same way; drove all the bugs away from the remaining hills that still had some whole plants in them, with a brush and a waterpot, and placed the boxes over the hills. After this, not a single bug molested the plants, though the garden was full of them.

It need not be said that the boxes should be placed so close to the ground, all around, as to prevent their crawling under. And, also, I think that, if the whole surface of the box, inside and outside, was tarred, it would be better, for two reasons: first, the boxes would look better and last longer; second, they would attract the power of the sun more fully,

and hasten the maturity of the plants, if, indeed, the gas that arises from the tar does not have some other effect still unknown, in making plants more green and healthy—perhaps, in repelling other invisible insects that annoy them, or furnishing a direct food or stimulus to their leaves, besides the increase of heat. At any rate, these boxes have the following great advantages:

1. They are cheap, much cheaper than gauze or glass, and can be safely packed in a corner of the garden, and used year after year.

2. They keep fowls entirely from the hills, if placed on when planted.

3. They not only keep off all kinds of bugs and vermin above the ground, but they bring the plants forward a week or two sooner than they otherwise would grow.

4. They are no trouble, comparatively; once put on and tarred, a man may leave his vines to take care of themselves, so far as fowls or bugs are concerned; and I think they *tend* to repel all kinds of insects, whether above or below ground.

I have another thing, also, to say, about this coal tar, namely, that mixed with one-half spirits of turpentine, with a little lampblack in it, it can be used in May, with a brush, to cover the lower parts of peach and apple-trees, for some eight inches above ground, and also in the forks of apple-trees, if needed, with perfect success, to repel the beetle that lays the egg for the different forms of borers; and I think a light cover of it, put on in spring, is the easiest way in which they can surely be kept off, without injury to the tree. On twenty acres of apple-trees on my old farm, the present owner uses the coal tar alone; but I think, when mixed as above, it is somewhat less glutinous, and less likely to injure the trees when used in excess, by heedless hands, than when pure.

The spirits of turpentine alone may be applied, with entire safety, to kill all forms of lice whatever, on fruit trees, by giving them a light brushing with it in the early season, just as they first commence their active summer life. An apple or pear-tree can be covered all over with it, without harm, so far as I have seen; and it has this advantage over all other known remedies, that it seems to penetrate and enter, for a time, into the circulation of the tree itself, so as to destroy the vermin even on the parts which it does not touch. Indeed, one man told me that he effectually drove all insects of the kind from his trees, by only brushing it upon the crotches and larger limbs, just as the sap began to rise; but I have not experienced this myself, and cannot say; yet, I have applied it freely to all lousy trees, with entire success for years.

I will here also say, that I think our new coal oil is one of the best things for rheumatic pains, when rubbed in thoroughly, or for many forms of cutaneous disease, of a scurvy or itching nature, or even for galls, or wounds, or bruises, on men and animals, that I have ever tried. And I think that it deserves the careful research of thoughtful men, to inquire earnestly how many other useful things Divine Providence has stored up for his children here, by the acre, and the continent almost, in the dark and hidden mines of unsightly stone coal, from which we are already beginning to get not only light and heat, but life also. Pardon these rude, but, I hope, useful thoughts.

Yours, truly,

J. B. TURNER.

GARDENER'S CALENDAR FOR JUNE.

As this month is usually hot and dry, very little planting can be done; the principal work to be done, is to stir the ground well around the various crops, and to keep down all weeds and grass. Melons and cucumbers will require frequent workings, and this should never be neglected after a season; the earth is left loose and permeable, and the vines will grow off luxuriantly. Water cucumber vines and melons, if the weather should prove dry. Tomatoes will require to be staked or supported with brush; a few vines trained up in this manner will bear a large quantity. Transplant cabbages for fall and winter use; and as we cannot do better than to furnish you with the following excellent timely remarks, we copy the following from the *American Agriculturist*:

"SETTING OUT CABBAGE, TOMATO, AND OTHER PLANTS.—Last spring we saw a farmer sitting out a hundred cabbage plants in the following manner: The plants were pulled up from the seed bed without loosening the ground around them, and as this was pretty compact, three-fourths of the fibrous roots were broken off. He then made a round hole with a stick about half an inch in diameter, thrust in the plant, dropped in earth to fill up the hole, packed it down, poured on a considerable quantity of water, and then covered up the plants with a burdock leaf to keep off the sun's rays, and left them to grow as best they could. We requested the privilege of setting out twenty plants for him, and proceeded thus:

First, we went to the seed bed, and with a flat stick loosened and lifted up a quantity of dirt around the roots, taking care to break very few of the most delicate fibres. We next went to the cabbage ground, and with a hoe prepared a place for each plant by mellowing and pulverizing the earth several inches in diameter. We scooped out a large hole with the hand, deep enough for a plant, and set it in carefully, with considerable loose earth still clinging to it. The roots were left spread out just as they had grown, and finely pulverized soil was then sprinkled in to fill up the hole, and carefully pressed down around the plant. We then added about half a pint of filthy water from the swill-pail, and requested that the plants should be left without any protecting covering. Our farmer friend said he could never spend so much time with a few plants. But mark the result.

During the latter part of summer, we visited the "cabbage patch," and found that of the twenty plants, one had been cut off by the grub, one had been injured by a careless blow from the hoe, and one had grown feebly, while seventeen of them bore large, solid heads of cabbage. Of the eighty other plants set out at the same time in the same soil, fifteen only had large heads, twenty-nine bore heads of medium size, fourteen had barely lived, and were not worth harvesting, while twenty-two had not survived the transplanting.

Save your seed peas carefully, by drying them in the sun, and then putting them up in jars or bottles, in which put bits of gum camphor, and keep them corked close. The egg of the pea bug is already deposited at the time of ripening, and one of the surest remedies is to heat the seed to a moderate degree, which will destroy the egg and prevent their ever making their appearance; but as there is some danger of the seed being heated to such a degree as to destroy their vitality, we would recommend the use of camphor.



BLACK TARTARIAN CHERRY.

This superb cherry has already become a general favorite wherever cultivated, and in size, flavor and productiveness, has no superior among black cherries. It is a native of Russia, and was introduced into England about 1796, and brought thence to this country, about thirty years ago.

It is of vigorous, rapid and upright growth. The leaves are large and the head erect, and from this habit it is difficult to train it low. The fruit ripens here about the 15th of May; and such bunches as are represented in the cut, are not at all uncommon. Fruit of the largest size, heart-shaped, (sometimes rather obtuse,) irregular, and uneven on the surface; skin glossy, bright purplish black; flesh purplish, thick, (the stone being quite small,) half tender, and juicy, very rich and delicious.

It is considered rather tender for the Northern climate, and complaint is occasionally made that the trees crack; with us it succeeds as well as any of the other varieties of rapid growth.

FARMERS AND THEIR WIVES.

Said a young person to a lady who set holding her baby, "Now what good will all your education do you? You have spent so much time in study, graduated with high honors, learned music and painting, and now only married a farmer. Why do you not teach school, do something to benefit the world with your talents, or if you choose to marry, why not take a teacher, a clergyman, or some professional man? But as it is, you did not need so much learning for a rural life."

The lady replied, "You do not look very far into the future. Do you not see this boy on my lap? I need all the study, all the discipline, both of mind and body, that I could get, in order that I may train

him aright. You see, I have the first impressions to make on the fair blank of this pure heart, and unless my mind was first cultivated, my own heart first purified, how could I well perform the task now placed before me! And besides, do you not suppose that farmers have hearts like other men, tastes just as pure, because they guide the plough and till the soil for their support? Do you not suppose their minds are just as capable of cultivation and expansion as other men? Have they no love of the beautiful, in their nature, of art? Cannot good paintings be just as much admired on their walls as others, or does the evening hour never pass as pleasantly with them when they gather around the piano after a day's labor is finished? Ah? my young friend, you made a sad mistake in your reckoning."

Of all occupations, give me that of a farmer. It is the most beautiful; his life is free from care, his sleep sweeter, his treasurer safer. A farmer need not be a slave of any, for he has none to please but himself. Not so with almost any tradesman, mechanic, or professional man. They have more or less to do with the world at large, and have all manner of persons to deal with, so that they have need of the patience of Job to live. They are well aware that they must not freely speak their minds at all times; that if they do they will lose custom; for they depend upon the people for a living, therefore they are the servants of all. Then what can be desired more? What is more peaceful, prosperous, honest, healthful, than a farmer's life?

IRON-MOULD IN LINEN.—Wash the spots in a strong solution of cream of tartar and water. Repeat, if necessary, and dry in the sun. Another method:—Rub the spots with a little powdered oxalic acid, or salts of lemon and warm water. Let it remain a few minutes, and then rinse well in clean water.

ANALYSIS OF GARDEN VEGETABLES.

[Dr. SALISBURY, in an interesting contribution to the Transactions of the New York State Agricultural Society, furnishes a most valuable analyses of various garden vegetables. As we have not room to give these analyses, we have briefly condensed some of the conclusions of Dr. S., which afford valuable suggestions for experiments in the culture of these products:—Ed.]

The roots of the *Vegetable Oyster*, contain a large per centage of sugar, detrine and albumen, which accounts for their richness. They contain about five per cent. of water more than the potato, that is about 81 per cent. for the root, and 85 for the top. Dr. S. recommends the following component parts for a special manure for this vegetable, viz: 33 parts of ashes, 10 parts common salt, 5 parts plaster.

The root of the *Carrot* is rich in sugar, dextrine, albumen and starch. One ton of the roots contain 141 lbs. sugar, 30 lbs. dextrine, $4\frac{1}{2}$ lbs. casein, 17 lbs. gluten, and $\frac{1}{4}$ lb. fat. One hundred pounds of ashes, 50 lbs. common salt, and 10 lbs. plaster will supply the inorganic matter taken by a crop from the soil; or, in other words, will form the constituents of a special manure for a soil which happens to become alike destitute of the materials of these substances—if there should happen to be such a soil, and if this fact could be determined.

The root of the *Beet* is about *nine-tenths water*. One ton of the fresh roots of the *turnip beet* contains 62 lbs. sugar, 20 lbs. dextrine, and 12 lbs. of albumen, casein and gluten taken together. The long *blood beet* contains about twice as much sugar, and about twice as much albumen, casein and gluten. The white sugar beet is less rich than the latter, but richer than the former, in these materials. Three hundred lbs. of ashes and 200 lbs. common salt, are recommended as a special manure for a crop of 20 tons.

Succory contains a large per centage of soda, and is rich in phosphoric acid, potash and lime; and *Celery* is rich in soda, lime, and sulphuric acid; which will point out the nature of any special manuring for these plants.

Muskmelon and *Watermelon*.—Dr. S. remarks on these, "The muskmelon contains a very large per centage of phosphoric acid and soda, and considerable potash; the watermelon a large per centage of soda and potash, and is quite rich in phosphoric acid. The occurrence of these bodies in such quantity in these plants, explains to us why dead animal matter, as flesh, bones, &c., common salt, and ashes, have such marked influence in promoting their growth and productiveness."

The *Cucumber* is similar in composition, but is most remarkable for the very large proportion of water it contains, being about $96\frac{1}{2}$ per cent. In other words, a ton of cucumbers contains only 70 lbs. of solid matter, the remaining 1930 lbs. being water!

CULTURE OF TURNIPS.

The Swedish turnip (*ruta-baga*,) should be sown, if practicable, as early as the middle of July, but the 20th or 25th of the month will answer, if they cannot be got in sooner. The yellow Aberdeen is a kind which requires nearly as long a season as the *ruta-baga*. The common flat turnip grows much quicker than the kinds before mentioned. It will produce a good crop, on tolerably rich land, sown as late as the 25th of August. Ground which has

produced a crop of rye or wheat, may give a crop of flat turnips the same season, by the addition of 150 pounds guano, or 200 super-phosphate, to the acre. They are less nutritive than the other kinds, but are, notwithstanding, very useful in feeding stock during the beginning of winter; and from the convenience of cultivating them as an after crop, they are, in many instances, profitable. For late keeping, or feeding in the latter part of winter and spring, the Aberdeens and Swedes are best.

A soil inclining to sand is most suitable for turnips. Compost of muck and barn-yard dung, with a dressing of leached ashes, furnishes a good manure. The seed should be sown in drills. Two feet spaces between the drills will admit the use of a small harrow or cultivator in cultivating the crop. Flat turnips should be thinned to eight inches between the plants, and *ruta-baga* to twelve inches.—If the ground is not very porous and dry, it will generally be preferable to form ridges on which to sow the crop. They may be made with a small plow drawn by one horse, or more readily with a double mould-board plow. On stubble or sward ground, care should be taken in making the ridges, that the grass and weeds are not turned up. The ridges should be levelled by passing a roller over them, before the seed is sown. A pound of seed to the acre, evenly distributed, as it may be by a good machine, is sufficient.

A dressing of plaster sown on the plants as soon as they are up, while they are wet with dew, will afford considerable protection against the turnip-fly or *flea*, and will, on many soils, greatly hasten the growth of the crop. The weeds must be killed as soon as they appear. The scuffle-hoe is the best hand tool for this purpose. It may be run rapidly along the ridges, close to the plants, and may take out almost every weed in the row without doing any damage. The spaces between the rows may be chiefly worked by a harrow or cultivator—the former is preferable on light lands. The plants should not be much thinned till they have got into the fourth leaf, and appear to be pretty well out of the way of the fly.

NOTES ON NEW STRAWBERRIES.

We append a report from Dr. Warder, Editor of the *Cincinnati*, which, at a meeting of the Cincinnati Horticultural Society, was submitted and accepted on the strawberry question. We are inclined to think it will prove nearer a "finality" than anything which has previously appeared:

"*Finality on the Strawberry*.—Wild or cultivated, the strawberry presents in its varieties, four distinct forms or characters of inflorescence.

1st. Those called *Pistillate*, from the fact that the stamens are abortive, and rarely to be found without a dissection of the flower. These require extrinsic impregnation.

2d. Those called *Staminate*, which are perfectly destitute of even the rudiments of pistils, and are necessarily fruitless.

3d. Those called *Hermaphrodite* or perfect, having both sets of organs stamens and pistils, apparently well developed. These are not generally good and certain bearers, as we should expect them to be. With few exceptions they bear poorly, owing to some unobserved defect, probably in the pistils. One-tenth of their flowers generally produce perfect and often very large berries.

4th. A rare class—a sort of *subdivision* of the preceding, has not only hermaphrodite flowers, but also some on the same truss that are of the pistillate character; and sometimes, in the same plant, a truss will be seen on which all the flowers are pistillate.

Now these four divisions are *natural* and *real*; they are also founded upon permanent characters, so far as we have been able to discover, after a most thorough investigation, extending through a long series of years, during which millions of strawberry blossoms have been examined with the severest scrutiny. Other forms may exist, and it is not claimed to be impossible that we may yet find a seedling which shall have the general character *pistillate*, that may show an occasional perfect or *hermaphrodite* flower, as a peculiarity of that individual, but we have never yet observed such a variety; and further, we believe that whatever impress, as to peculiarities of foliage, pubescence, habit, inflorescence, or fruit, each distinct seedling may receive with its origin, it will be retained in its increase by runners, so long as the variety remains extant. Seedlings may vary from the parent, but off-shoots will not be materially different, except by accidental malformation or by development of important organs.

A GOOD GERMAN NOTION ABOUT FRUIT TREES.

The present great dearth of fruit suggests to us a few remarks concerning a good custom, whose traces are still found, all through Eastern and Middle Pennsylvania. The early settlers of Lancaster, York, and other adjoining counties, were Germans, and in their migration to this country brought with them the good custom of fruit trees. Every farmer was careful to set out apple, cherry, and pear trees, and quite commonly too a grape vine. During a visit to those first settlements lately, we made special note of the uniformity of this custom. Every farm house has its garden attached to the house, and on the corners of this garden you may confidently look for one or more pear trees, and almost to a certainty a quince tree. Not unfrequently there is a front yard, and if so there is sure to be a pear tree in it. The spring house or the pump had its grape. By simply following out the emotions of their affection for the fatherland, these unobtrusive foreigners brought to their new homes the choice and fragrant recollections of their old homes, and now, as the result of this piety towards their native land, there are many goodly trees, both fruitful and shady, around many a Pennsylvania farm house.

In respect to no tree are these remarks so true as respecting the pear tree. Being a slow grower and long liver, the proofs of their proprietor's old country customs are thickly set all over the State. It was quite touching, in some instances, to note, that where the old log house had given way to a large brick or stone mansion, and the former close fellowship between the kitchen and garden had been broken up, and the fence lines removed, there stood the sentinel pear trees, which had marked the corners of the former enclosure, still swaying their long branches over the old accustomed places. Cenotaphs they are of the Edens which are spread beneath them. Now, we know that some people, especially some of our fast American people, do not think very highly of borrowing or learning from the trusting, slow-going German, but "*fas est ab hoste doceri*," which being freely translated may mean here, "it is right to learn a good thing even from the 'Dutch.'"¹ We think in

respect to the slow-growing pear tree, the slow-going German has the advantage of it.

We might extend these remarks by speaking of the hoary-limbed apple trees, the gnarled and knotted cherry, and the long and gaunt grape vines that attest the prudent and thrifty character of the German, but we forbear—only remarking, that we hope our young farmers' sons will plant trees—fruit trees. It is the cheapest a man can do.—*Ohio Farmer*.

TO FARMERS.—We would say to farmers who are accustomed to committing the results of their observations to paper, that our columns are ever open to their contributions, for which we shall always be thankful. To those who are not in the habit of writing for the press, we would urge an attempt. They need not delay for want of literary ability; *fine* writing is not expected or desired; plain facts, such as occur in the experience of all, are wanted, and if they are only dressed in the homely, everyday garb in which farmers usually clothe their ideas in conversation, it is sufficient. A little practice will soon render it easy to write, and by habit it will even become a pleasure. One of the most distinguished contributors to the agricultural papers of the day, learned to write after he was forty years old, and while engaged in the practical labors of husbandry.

We invite inquiries on any subjects connected with agriculture, and trust that all will be free in proposing questions, which will be answered editorially or by contributors. The attention of our readers, generally, is particularly called to this, and those who are in possession of any information not shared by the public, are requested to remember the injunction—"Do Good and Communicate."

FARMERS' DAUGHTERS.—There is no farm-house where the daughters of a wise, pains-taking mother may not grow up lady-like and pleasing to the eye of the most refined. One, the child of very humble, hard-working parents, rises before me as I write—a fair, sweet vision. With her round, rosy face, her smoothly brushed folds of dark hair, her sunny smile, her gentle tones of voice, her elastic movements, graceful, because unconscious and perfectly natural, her trim little figure, arranged in cheap calico of modest colors, neatly but simply made—she is an object on which the eye of the fastidious dweller in the city avenue could not help looking on with delight, so fresh, so natural, so kind and pure looking is she. She is as ignorant of all that boarding schools can teach as Delia Ann; but she can wash and iron, make bread and butter, and cheese, cook a good farmer's dinner, and set the daintiest of little stitches in all kinds of plain sewing; and she has learned it all of that excellent, kind mother.—*Southern Homestead*.

LIME IN TRANSPLANTING TREES.—An English publication says, that a large plantation of trees has been formed in that country, within a few years past, without the loss of a single tree, by putting a small quantity of lime in the hole when planting the tree. Four bushels of lime are said to be sufficient for an acre. The lime is thoroughly mixed with the soil, in order that it might be reached by the roots, with equal facility in every direction, as its principal effect is to push forward the tree during the first precarious stages of growth.

MANNER OF MILKING.

We have always believed that this part of farm work is performed in a careless and indifferent way, and it is also a fact that milking so done must produce very serious results upon the usefulness of the cow. The following remarks which we condense from a recent English agricultural journal, not only show this important fact, but point out the way in which it should be performed. Very often upon our farms this is left for the "hired man" to do, who has no interest to accomplish it in the right way; but if he must do it, give him ample time and have it done in a faithful manner, as here shown.

The manner of milking has a more powerful and lasting influence on the productiveness of the cow than most farmers are aware of. That a slow and careless milker soon dries up the best cows, every practical farmer and dairy man knows. The first requisite of a good milker is, of course, the *utter cleanliness*. Without this the milk is unendurable. The udder should, therefore, be carefully cleaned before the milking commences. The milker may begin gradually and gently, but should steadily increase the rapidity of the operation till the udder is emptied, using a pail large enough to hold all, without the necessity of changing. Cows are very sensitive, and the pail cannot be changed, nor can the milker stop or rise during the process of milking, without leading the cow more or less to withhold her milk. The utmost care should be taken to strip the last drop, and do it rapidly, and not in a slow and negligent manner, which is sure to have its effect on the yield of the cow. If any milk is left, it is reabsorbed into the system, or else becomes caked, and diminishes the tendency to secrete a full quantity afterwards. If gentle and mild treatment is observed and persevered in, the operation of milking appears to be one of pleasure to the animal, as it undoubtedly is; but if an opposite course is pursued—if, at every restless movement, caused, perhaps, by pressing a sore teat, the animal is harshly spoken to—she will be likely to learn to kick as a habit; and it will be difficult to overcome it afterwards. To induce quiet and readiness to give down the milk freely, it is better that the cow should be fed at milking time with cut food, or roots, placed within her easy reach. The same person should milk the same cow regularly, and not change from one to another, unless there is special reasons for it.

ITEMS FOR HERDSMEN.

CARROTS FOR CATTLE.—A correspondent of the *Rural American* says: "Carrots for milch cows I do not think are very good; they do not make as much milk as some other roots. They do very well to fat cattle with, but then they do not produce as much fat, and solid meat, as some other feed. I would rather have the same quantity of turnips or potatoes, than carrots, to feed young cattle, sheep, or fat cattle: and I would rather have one bushel of good sugar beets than two bushels of carrots, for milch cows."

We do not subscribe to the above doctrine with reference to the value of carrots. Do our readers?

LICE ON CATTLE.—A recent writer says: "If a little salt be given to cattle every day for two weeks it will be sure to kill every louse upon them. It is the best way invariably to kill lice upon calves. If they get so they will not eat any salt, give it to them with a mess of something. Cattle are seldom

troubled with lice if they are salted once in a week during the year."

COWS WITH SCOURS.—An English remedy is: "Give her one pound epsom salts, with two ounces of ground ginger, and one pound treacle in a quart of warm ale. After the physic has operated, follow up by a continuous course of nourishing food, such as oil cake." Thoroughly physic the cow, and follow with nourishing food, will apply in most cases. —*Southern Homestead.*

COLD FROM DAMP CLOTHES.—If the clothes which cover the body are damp, the moisture which they contain has a tendency to evaporate by the heat communicated to the body. The heat absorbed in the evaporation of the moisture contained in the clothes must be, in part, supplied by the body, and will have a tendency to reduce the temperature of the body in an undue degree, and thereby to produce cold. The effect of violent labor or exercise is to cause the body to generate heat much faster than it would do in a state of rest. Hence we see why, when the clothes have been rendered wet by rain or perspiration, the taking of cold may be prevented by keeping the body in a state of exercise or labor till the clothes can be changed, or till they dry on the person; for in this case the heat carried off by the moisture in evaporating, is amply supplied by the redundant heat generated by labor or exercise.

KEEPING HORSES' FEET AND LEGS IN ORDER.—If I were asked to account for my horse's legs and feet being in better order than those of my neighbors, I should attribute it to the four following circumstances: First, that they are all shod with few nails, so placed in the shoe as to permit the foot to expand every time they move; secondly, that they all live in boxes, instead of stalls, and can move whenever they please; thirdly, that they have two hours' daily walking exercise when they are not to work; and, fourthly, that I have not a head-stall or rack-chain in my stable. These four circumstances comprehend the whole mystery of keeping horses' legs fine, and their feet in sound working condition up to a good old age.—[SAM.]

HOW TO WATER PLANTS.—As a rule, water should never be given, until the further withholding of it would be detrimental to the plants. Habitual watering does, in the majority of cases, more harm than good. Plants left to battle with drouth, send their roots down deep in search of moisture, and when rain does come, they benefit more by it than those that have regular waterings all along. If the ground is dug deeply, and kept in good heart, plants that have once got established will bear drouth for any length of time, but things lately planted, and that have not had time to "get hold," must be kept supplied, or their beauty may vanish for half the season.

COTTON LATITUDES.—The production and growth of cotton is a monopoly of climate, it cannot be successfully cultivated, except between the latitudes of 30 and 35 degrees; extending from the Atlantic to the Pacific oceans—a region of earth's surface 240 miles in width, and 2,000 in length. Much of this region is incapable, from sterility and other causes, to profitably cultivate this staple. It follows, as necessary consequence, that as the amount of cotton lands diminish, the remainder are rendered more valuable.

The Apiary.

"In the nice bee what sense so subtly true,
From poisonous herbs extracts the healing dew."

For the Farmer and Planter.

HOW TO TAKE HONEY.

As I see a great many modes of taking honey published, I will give you my own, if it be of any service to any of your readers. When I wish to take a bee-hive, I place a low table about 25 or 30 feet in the rear of the hive, then I get a large quantity of green pine-tops, and make a smoke on the side that the wind may chance to blow from; I then have a new hive ready to place where I take the old from, as I move the old. I immediately place the new one in the same position as the old was. I then take the old hive and place it flat on the table, with the top towards the smoke. I then knock the head, and make a smoke of old rags, and take it in my hand, fanning the smoke in, and run the bees out. They will then go to the new hive, and I can take out the honey without any trouble.

OVERSEER.

From the Boston Cultivator.

BEE CULTURE.

PROPER SIZE OF HIVES.

MESSRS. EDITORS:—It is of great consequence to the apiarian to have hives of the right size and shape. Upon a due regard to these particulars, success in bee-keeping greatly depends. A hive of the proper size, should contain about 200 cubic inches, or be 12 inches square by 14 inches in height, in the clear. I have found that when placed in hives considerably larger than the above dimensions, bees do not swarm at all some seasons, and seldom more than once when the season is very favorable. The philosophy of this is, as the common age of the worker bee is but a few months, however great the quantity of bees may be in the fall, they dwindle away during the cold months to a certain quantity, thus leaving a vacant space to be filled up during the next breeding season. Now if this space happens to be large enough to accommodate the numbers that will accumulate the next season, it is evident they will not send off a swarm, as they can all be accommodated where they are; want of room being always what causes the young swarm to leave the parent hive and seek a home elsewhere. I will illustrate this point by a case that occurred in my own practice.

I once put a swarm of bees into a hive 18 inches square by 20 inches in height, in the clear. My object was to have a powerful swarm, that would store a great quantity of surplus honey in boxes, which were arranged upon the hive for that purpose. Being a novice in the art of managing bees, I ignorantly supposed that the next season a large portion of the bees in the hive would enter the boxes to work. The result was, that at the end of four years they had neither sent off a swarm, nor made a pound of surplus honey. This set me to thinking on the sub-

ject, and I came to the conclusion that I was on the wrong track—that my hive was much too large, as I found that each following spring there would be but about the same number of bees as at first, showing that they increased to a certain extent each season during the warm months, but diminished in number in about the same ratio during the cold season.—Consequently, by way of experiment, I constructed a hive much smaller; in fact, I ran into the opposite extreme, and got my hive as much too small as the first was too large, as I think will be shown from comparative results. The first season they stored about five pounds of surplus honey—it was a late season—the second season they sent off one swarm the 20th of June—made no surplus honey—the third season they swarmed the 24th of June, and again the 4th of July. This latter swarm was about the size of a man's two fists—made no honey except that stored in the main hive.

I need not point out the disadvantages of this system of management, nor the profit I might have derived, had I in the first place adopted the size of hives I am now using.

At the *very lowest calculation*, at the end of four years I should have had a dozen good swarms of bees, besides a good amount of surplus honey, whereas I had only one large hive filled with honey of an inferior quality. In the experiment with the smaller one I did a little better, though either way, if followed out in practice, will prove ruinous, as far as profit is concerned.

I have noticed in these small hives that in the month of August the bees appear to be crowded for want of room, and frequently have known them to commence a slaughter of their own numbers; seeming to reason that as the season for swarming was past, and their numbers increased beyond the capacity of their store-house to contain food during the winter, these extreme measures were necessary for the safety of the colony. Thus by the loss of a few they seem to design to save the many. That numbers are thus killed off is a fact I have witnessed several times, and there is no doubt in my mind that it is the effect of cramping their operations by the size of the hive.

FRYE, JR.

STIR THE SOIL THOROUGHLY.—Plowing and harrowing and stirring the soil is the order of the day for the most of this month.

This stirring of the soil, old Jethro Tull used to teach us, was the first and the last essential of "goode husbandrie." Indeed, he was of opinion that better crops could be raised by very finely pulverizing the soil and putting on no manure, than could be raised by manuring highly and pulverizing the soil but little. By the improved implements of the present day, we can pulverize very thoroughly at comparatively much less labor and cost than they could in Tull's day. Why not adopt his theory of thorough pulverization and the modern theory of high manuring? Combine them together. At any rate, if you plow at all, plow well, and make the soil as mellow as possible.

Gas is pronounced to be so complete a disinfectant, that no person can take the small-pox in a house where it is used.

When we are alone, we have our thoughts to watch; in the family, our tempers; in company, our tongues.

Domestic Economy, Recipes, &c.

CERTAIN CURE FOR THE CHILLS AND FEVER.

A gentleman of integrity and respectability, who has tried the following for many years, and in cases of Chills and Fever of many year's standing, without a single failure to cure, gives us his only and simple remedy, which is—

Make a silk bag, about three inches square, and fill it with Frankincense; suspend it from the neck, so that it will rest upon the pit of the stomach.

We candidly confess our doubt in the virtue of the remedy, but, as it can do no harm, and *may* do good, we hope some of our readers who are themselves, or know any one so unfortunate as to be afflicted with the disease, will give it a trial, and report to us the result. The gentleman who gave us the information stated, that it had saved him many hundreds of dollars for Doctor's bills, on his plantation, in Florida. The Frankincense can be purchased at any of our Drug stores.

TO PRESERVE PLUMS.—Take fine ripe plums, weigh them, and to each pound allow a pound and a half of white or loaf sugar. Put them into a pan and scald them in boiling water, to make the skins come off easily. Peel them, and throw them, as you do so, into a large pitcher. Let them set for an hour or two, and then take them out, saving all the juice that has exuded from them while in the pitcher. Spread the plums out on large dishes, and cover them with half the sugar you have allotted, (it must be previously powdered,) and let them lie in it all night. Next morning, pour the juice out of the pitcher into a preserving kettle, add the last half of the sugar to it, and melt it over the fire. When it has boiled skim it, and then put in the plums. Boil them over a moderate fire for about half an hour; then take them out one by one with a spoon, and spread them on large dishes to cool. If the syrup is not sufficiently thick and clear, boil and skim it a little longer, till it is. Put the plums into glass jars and pour the syrup, warm, over them. The flavor will be much improved by boiling in the syrup, with the fruit, a handful of the kernels of plums, blanched in scalding water and broken in half. Take the kernels out of the syrup before you pour it into the jars.

You may preserve plums whole without peeling, by pricking them deeply at each end with a large needle.

REMEDY FOR BITES AND STINGS.—As many of our readers are preparing to travel or go to the country, for the summer, it may be useful to remind them that an ounce vial of spirits of hartshorn should be considered one of the indispensables, as in case of being bitten or stung by any poisonous animal or insect, the immediate and free application of this alkali, as a wash, to the part bitten, gives instant, perfect and permanent relief, the bite of a mad dog (we believe) not excepted; so will strong ashes-water.—*Hall's Journal of Health.*

We have tried a paste made of salcratus and water, and found it to cure bad stings almost immediately.

APPLE JELLY.—Cut in quarters six dozen fall pippins, take out all the cores, put them into a pan, just cover them with cold water, and place them on the fire. Let them boil until quite soft, then drain upon a seive, catching the liquor in a basin, which passes through a clean jelly-bag; weigh out one pound of sugar to every pint of liquor; boil the sugar separately until it is almost candy, then mix the liquor with it, and boil, keeping it skimmed until jelly falls from the skimmer in thin sheets; then take it from the fire, put in small jars, and let it stand a day until quite cold, then put paper over and put by till wanted.

A PLAIN CUSTARD.—Boil a quart of new milk, keeping out a little to mix with two tablespoons of flour; thicken the boiling milk with it, let it cool a little, then add two eggs well beaten; sweeten and flavor with lemon or nutmeg, and bake in a deep plate, with a crust; or, if preferred, after the eggs are added, it may be set on the fire, and stir till the egg is turned, but not let it boil; then sweeten and flavor it, and dip it in cups to cool and use.

HOW TO KEEP GRAPES.—Last February, while traveling west, a lady traveler gave me a bunch of Isabella grapes. They were shrunk nearly one-third. They were delicious, and she informed me that she had kept them in the *chaff*, or more properly, the *shell*, *bran*, or covering of buckwheat. They had kept with little or no trouble.

A POULTICE FOR FELONS.—Take castile soap, and scrape a large or small quantity, according to the amount wanted, and simmer in new milk till it forms a paste as thick as cream; cool, and apply. You will find this one of the best poultices for felons, or any kind of swelling that needs poulticing, and far superior to bread and milk. Try it, ye afflicted.

HEART-BURN.—Acidity of the stomach, often called "heart-burn," from the sensation which it produces, may be cured almost in a moment, by a wine-glass full of water, in which a teaspoonful of carbonate of soda is dissolved.

A PERSON, speaking of a drink he once had occasion to indulge in, says he could not tell whether it was brandy or a torch light procession that was going down his throat.

A CURE FOR THE GRAVEL.—A tea of silks of corn—drink freely—preserve the silks when the corn is in the roasting state.

TO DRY CHERRIES AND PLUMS.—Stone them, and halves. Pack them in jars, strewing sugar between each layer.

CURE FOR THE EAR-ACHE.—Dr. Root says, that the sap or oil of walnuts put in the ear, on cotton, relieves the worse cases of the ear-ache.

A TRUE SAYING.—He who encourages young men in the pursuit of agriculture, is doing a good work for the morals of society a hundred years hence.

CREAM of Tartar and boiling water will remove ink spots.

THE smell of chloride of lime is said to drive away gnats.